Base Realignment and Closure
Program Management Office East
Philadelphia, PA

Final

Preliminary Assessment Report

Basewide Investigation of Per- and Polyfluoroalkyl Substances (PFAS)

Former Naval Air Station Chase Field
Beeville, Texas

September 2021

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DCN: MMAC-4010-4022-0069

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Prepared for:

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Multi-MACJV

FINAL

PRELIMINARY ASSESSMENT REPORT

For

BASEWIDE INVESTIGATION OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) AT FORMER NAVAL AIR STATION CHASE FIELD BEEVILLE, TEXAS

September 2021

Prepared for

Base Realignment and Closure Program Management Office East
Philadelphia, PA

REVIEW AND APPROVAL

Project Manager:  9/22/2021

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Table of Contents

Table of Contents (continued)

List of Appendices

Table of Contents (continued)

Page

List of Figures

Page

List of Tables

Page

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Acronyms and Abbreviations

ºF ..... degrees Fahrenheit
µg/L ..... microgram(s) per liter

AFFF ..... aqueous film-forming foam
AIMD ..... aircraft intermediate maintenance department
amsl ..... above mean sea level
AOI ..... area of interest
APSA ..... accumulation point staging area
AST ..... aboveground storage tank
AVGAS ..... aviation gasoline

BDA ..... Bee Development Authority
BEC ..... Base Realignment and Closure Environmental Coordinator
BEQ ..... Bachelor Enlisted Quarters
BOQ ..... Bachelor Officers Quarters
bgs ..... below ground surface
BRAC ..... Base Closure and Realignment Act

CB ..... construction battalion
CERCLA ..... Comprehensive Environmental Response, Compensation, and Liability Act
CFR ..... Code of Federal Regulations
CSD ..... constant speed driving

DoD ..... United States Department of Defense
DON ..... United States Department of the Navy
DPDO ..... Defense Property Disposal Office

EnSafe ..... EnSafe/Allen & Hoshall
Envirodyne ..... Envirodyne Engineers, Inc.
ER ..... Environmental Restoration

FFTA ..... firefighting training area
FOST ..... Finding of Suitability to Transfer
FR ..... Federal Register

GSE ..... ground support equipment
GWDB ..... Groundwater Database

Acronyms and Abbreviations (continued)

ID.....identifier
IR.....Installation Restoration
ITRC..... Interstate Technology & Regulatory Council

LC/MS-MS.....liquid chromatography and tandem mass spectrometry
LHA .....lifetime health advisory

Mil Spec.....Military Specification
MMEC Group ..... Multi-Media Environmental Compliance Group
MRL..... minimum reporting limit

NA ..... not applicable
NAAS..... Naval Auxiliary Air Station
NALF ..... Naval Air Landing Field
NAS.....Naval Air Station
NAVFAC.....Naval Facilities Engineering Systems Command
NCP..... National Oil and Hazardous Substances Pollution Contingency Plan
NDI .....nondestructive inspection
NEI .....Nicklaus Engineering, Inc.
NIRIS.....Naval Installation Restoration Information Solution

OWS.....oil/water separator

PA .....Preliminary Assessment
PCB.....polychlorinated biphenyl
PCL .....protective concentration level
PFAS..... per- and polyfluoroalkyl substances
PFBA.....perfluorobutyric acid
PFBS.....perfluorobutanesulfonic acid
PFC .....perfluorinated compound
PFOA..... perfluorooctanoic acid
PFOS.....perfluorooctane sulfonate
PFHxS.....perfluorohexane sulfonate
PMO ..... Program Management Office
POTW..... publicly owned treatment works
PRG ..... preliminary remediation goal
PTFE .....polytetrafluoroethylene
PW ..... Public Works

Acronyms and Abbreviations (continued)

QSM ..... Quality Systems Manual

RPM ..... Remedial Project Manager
RSL ..... Regional Screening Level

SNUR ..... Significant New Use Rules
SWMU ..... solid waste management unit

TCEQ ..... Texas Commission on Environmental Quality
TDCJ ..... Texas Department of Criminal Justice
TNRCC ..... Texas Natural Resource Conservation Commission
TO ..... Task Order
TPH ..... total petroleum hydrocarbons
TPWD ..... Texas Parks and Wildlife Department
TRRP ..... Texas Risk Reduction Program
TWDB ..... Texas Water Development Board

UCMR ..... Unregulated Contaminant Monitoring Rule
USDA ..... United States Department of Agriculture
U.S. EPA ..... United States Environmental Protection Agency
USFWS ..... United States Fish and Wildlife Service
USGS ..... United States Geological Survey
UST ..... underground storage tank

VSI ..... visual site inspection

Wood ..... Wood Environment & Infrastructure Solutions, Inc.

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1.0 Introduction

This Preliminary Assessment (PA) Report for the basewide assessment of per- and polyfluoroalkyl substances (PFAS) at former Naval Air Station (NAS) Chase Field (Figure 1) has been prepared by Multi-MAC JV, a joint venture comprising Wood Environment & Infrastructure Solutions, Inc. (Wood) and Nicklaus Engineering, Inc. (NEI), on behalf of Naval Facilities Engineering Systems Command (NAVFAC) Base Realignment and Closure (BRAC) Program Management Office (PMO) under Contract Number N62470-19-D-4010, Task Order (TO) Number N6247320F4022. Research has been conducted in general accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Sections 104 and 121; Executive Order 12580; and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This PA report provides findings from research conducted to identify potential areas of interest (AOIs) at former NAS Chase Field where materials containing PFAS were stored, handled, discharged, disposed of, or used and their potential for release.

1.1 General Background on PFAS

PFAS are a complex family of several thousand manmade fluorinated organic chemicals that have been produced since the mid-20th century (Interstate Technology & Regulatory Council [ITRC], 2020). PFAS possess chemical structures that give them unique properties, including thermal stability, friction reduction, and the ability to repel both water and oil. PFAS are characterized by carbon chains of varying lengths containing carbon-fluorine bonds. The strong electronegative force of the carbon-fluorine bond requires a large amount of energy to break, which makes PFAS extremely resistant to biodegradation, photo-oxidation, direct photolysis, and hydrolysis. For decades, PFAS were used in a wide range of consumer and industrial products. They have been used to impart water, grease, and stain resistance to carpeting, apparel, upholstery, food paper wrappings, and paper and cardboard packaging products. PFAS have also been used as processing aids in the manufacture of fluoropolymers such as nonstick coatings on cookware. They have applications in metal plating, aerospace, photographic imaging, semiconductor, automotive, construction, electronics, and aviation industries, and are used in some firefighting foams. Some fire-resistant hydraulic fluids and pesticides are also known to contain PFAS (United States Environmental Protection Agency [U.S. EPA], 2016c; ITRC, 2020).

PFAS were initially invented in the 1930s with the creation of polytetrafluoroethylene (PTFE). Initial production of PFAS began in the late 1940s with the production of perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) (ITRC, 2020). PFOS was used in stain- and water-resistant products, and PFOA was used for

protective coatings. The use of these compounds (mostly PFOS) in firefighting foam began in the 1960s and they were put into routine use by the early 1970s. Perfluorobutanesulfonic acid (PFBS), developed in approximately 2003 to replace PFOS, has been manufactured for use in paints, cleaning agents, and water-impermeable products.

Production and use of PFOS and PFOA, along with other long-chain PFAS, have been reduced over the past 20 years. In 2000, 3M announced a voluntary phase-out of perfluorooctanyl chemistries, which included PFOS, perfluorohexane sulfonate (PFHxS), PFOA, and related precursors. In 2006, U.S. EPA initiated the global PFOA Stewardship Program: eight major manufacturing companies of PFOA and other longer-chain perfluorinated carboxylates committed to achieving a 95 percent reduction in both facility emissions and product content levels by 2010 and elimination by 2015. All companies met the established goals (U.S. EPA, 2015).

Also, since 2000, U.S. EPA has issued additional regulations, Significant New Use Rules (SNURs), which require manufacturers and processors of identified chemicals to notify U.S. EPA of new uses of these chemicals before they are commercialized. In October 2017, U.S. EPA finalized a SNUR on 183 PFAS believed to be no longer manufactured in or imported to the United States. Furthermore, in February 2020, U.S. EPA released a pre-publication notice of a SNUR proposal to eliminate the exemption for long-chain perfluoroalkyl carboxylates as part of surface coatings in a variety of articles (U.S. EPA, 2020a).

PFAS have been identified by U.S. EPA as “emerging contaminants” (U.S. EPA, 2017) and are of environmental concern because of their persistence in the environment and in organisms, migration potential in aqueous systems (e.g., groundwater), historically ubiquitous use in commercial products, and possible adverse health effects at low levels of exposure. At this time, only three PFAS have U.S. EPA-derived toxicity values available to help understand potential health effects from exposure: PFBS, PFOA, and PFOS. In 2016, U.S. EPA issued a drinking water lifetime health advisory (LHA) of 0.07 micrograms per liter (µg/L) for PFOA and PFOS. When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOA and PFOS (PFOA+PFOS) should also be compared with the 0.07 (µg/L) LHA level due to similarity in the non-cancer health effects of PFOS and PFOA (U.S. EPA 2016a, 2016b, 2016c). Although not legally enforceable, the LHA has been a driving force for investigation and remediation efforts.

Currently, PFBS is the only PFAS listed in the May 2020 U.S. EPA regional screening levels (RSLs). The generic RSL tables provide a noncancer reference doses, screening levels for residential soil (1,300 milligrams per kilograms [mg/kg]), industrial soil (16,000

mg/kg), tap water (400 µg/L), and soil screening levels for protection of groundwater (0.13 mg/kg) for PFBS only (U.S. EPA, 2020b).

In addition, on December 19, 2019, U.S. EPA published a guidance document for interim recommendations for addressing groundwater contaminated with PFOA and/or PFOS. The guidance document recommends that screening of sites be based on a target hazard quotient of 0.1 for PFOA or PFOS individually, which is currently 0.04 µg/L (i.e., site groundwater concentrations should be compared to one-tenth of the calculated tapwater RSL of 400 µg/L for PFOS or PFOA, which works out to 40 µg/L). The reason for selecting a target hazard quotient of 0.1 (i.e., one-tenth the acceptable concentration for non-cancer effects) is to protect against the possible co-occurrence in groundwater of multiple PFAS and other chemicals with similar or additive health effects.. In addition, it recommends that the U.S. EPA LHA of 0.07 µg/L be used as the recommended Preliminary Remediation goal (PRG) for groundwater that is a current or potential source of drinking water where no state or tribal maximum contaminant level or other applicable or relevant or appropriate requirements are available or sufficiently protective (U.S. EPA, 2019

The State of Texas has issued Tier 1 protective concentration levels (PCLs) in the Texas Risk Reduction Program (TRRP) for 16 PFAS, including PFOA, PFOS and PFBS (Texas Commission on Environmental Quality [TCEQ], 2019). However, for technical reasons stated in the DoD comment letter regarding the use of PCLs as risk assessment screening values and as cleanup standards in CERCLA investigations with PFAS at Texas Military Installations, the PCLs will be used included for comparison only (DoD, 2020b).

For the purposes of this PA and further evaluation of PFAS at DoD installations, a screening level of 0.07 µg/L for PFOA, PFOS and PFOA+PFOS is used to evaluate contamination in drinking water and a screening level of 0.04 µg/L for PFOA and PFOS and 40 µg/L for PFBS is used for groundwater per DoD guidance (DoD, 2019) and as shown in Table 1-1

Table 1-1: Current Federal Screening Criteria for PFOA, PFOS, and PFBS

Chemical	Federal Screening Criteria		
	Drinking Water [1,2,3,4] (µg/L)	Groundwater [5] (µg/L)	Soil [5] (mg/kg)
PFOA	0.07	0.04	0.13
PFOS	0.07	0.04	0.13
PFOA+PFOS	0.07	NA	NA
PFBS	400	40	130

Notes:
Acronyms:
µg/L = microgram(s) per liter; DoD = United States Department of Defense; NA = not applicable; PFBS = perfluorobutanesulfonic acid; PFOA = perfluorooctanoic acid; PFOS = perfluorooctane sulfonate; U.S. EPA = United States Environmental Protection Agency

Sources:
1. U.S. EPA. 2016a. Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS). 822-R-16-004. May.
2. U.S. EPA. 2016b. Drinking Water Health Advisory for Perfluorooctanoic Acid (PFOA). 822-R-16-005. May.
3. U.S. EPA. 2016c. Fact Sheet, PFOA and PFOS Drinking Water Health Advisories. EPA 800-F-16-003. November.
4. U.S. EPA. 2020b. Regional Screening Levels. May. Available at: https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables
5. DoD. 2019. Memorandum on Investigating Per- and Polyfluoroalkyl Substances with the Department of Defense Cleanup Program, Residential Scenario Screening Levels. October 15.

1.2 Background of PFAS Use

Although PFAS have been used in a variety of applications as described above, such as metal-plating operations and photographic imaging, the most prevalent application of PFAS at United States Department of the Navy (DON) installations has been in aqueous film-forming foam (AFFF) for firefighting. In terms of mass/concentration at DON installations, use of AFFF is considered to have the greatest potential for release of PFAS to the environment. Evidence showing the initial use of PFAS-containing AFFF at DON installations includes the Military Specification (Mil Spec) for AFFF (MIL-F-24385), issued in 1969, and the DON's Qualified Products List from 1970 that included 3M Company's AFFF formulation. The DON has used AFFF containing PFAS in fire training exercises, in suppression of aircraft and other vehicle fires, and in aircraft hangar fire suppression systems at many of its installations across the United States.

The potential release mechanisms of PFAS to the environment at DON BRAC facilities could have historically included AFFF use as part of the following activities:

- Fire training exercises at burn pits or structures
- Crash crew training exercises
- Hangar fire suppression system operations, testing, and accidental releases
- Firefighting and crash response vehicle testing
- Emergency response actions, such as at aircraft and vehicle crash sites
- Responses to Class B or fuel fires
- Improper filling and leakage from storage tanks, firefighting trucks, or crash response vehicles

Class A fires are associated with materials such as cloth, wood, and paper. Suitable firefighting agents for Class A fires penetrate the burning material to extinguish the fire, such as water. Class B fires have combustible liquid or gas as a fuel. Firefighting agents used on Class B fires will either inhibit the chemical reactions, such as dry chemical or Halon, or will smother the fire using carbon dioxide gas or foam (United States Fire Administration, 2017). PFAS containing AFFF foams are intended only for Class B fires.

Other potential release mechanisms of PFAS could have included releases of PFAS from oil/water separators (OWSs) and landfills where PFAS-containing materials or waste were discharged or disposed of, sludge from wastewater treatment plants that received PFAS-impacted influent; or releases of PFAS from vapor suppression systems associated with chromium plating operations (DON, 2016). PFAS can also be found at ordnance burn areas in some instances where fire control was determined to be necessary.

1.3 Objectives

The objectives of this PA Report are to identify AOIs at former NAS Chase Field where materials containing PFAS may have been released to the environment because of past activities where further investigation may be warranted to determine the presence of PFAS at those AOIs, as well as to identify the AOIs where no suspected PFAS release has occurred and recommend those for no further action (NFA). Another objective of this PA Report is to identify the land use surrounding the installation (1 mile from the former NAS Chase Field installation boundary) and all drinking water sources, by parcel, within this identified area.

This PA Report accomplishes these objectives by identifying areas where materials containing PFAS are/were potentially stored, handled, discharged, disposed of, or used at former NAS Chase Field and evaluating whether PFAS may have been released into the environment because of those activities. For AOIs that may have a potential for a PFAS release to the environment, further investigation may be warranted to determine the presence of PFAS based on an initial assessment of potential migration pathways. This PA report includes findings from research conducted to identify potential locations of PFAS release to the environment at the former NAS Chase Field and is limited to sites within the former installation boundaries. This PA Report includes findings from research conducted to identify potential locations of PFAS release to the environment at former NAS Chase Field and is limited to areas within the former installation boundaries.

1.4 Scope

To achieve the objectives of this PA, research was conducted using (1) online research on the use and storage of PFAS containing materials within the former installation boundaries, (2) archival records research and historical document review, and (3) group discussion/kickoff meeting and interviews of former NAS Chase Field personnel. Research was conducted to find information on use and storage of PFAS only within the former installation boundaries for the period from 1940 to present.

2.0 Installation Location and Description

Former NAS Chase Field encompasses approximately 2,368 acres in Bee County, Texas, and is located approximately 65 miles northwest of Corpus Christi and 85 miles southeast of San Antonio (Figure 1). Beeville, the county seat, is located 5 miles west of former NAS Chase Field on Texas Highway 202.

2.1 Historical Background

In 1942, the efforts to accelerate the DON's aviation training program at NAS Corpus Christi demanded additional landing facilities. In response to this need, the DON expressed interest in the Beeville Municipal Airport, which was then under construction, and commissioned the base as Naval Auxiliary Air Station (NAAS) Chase Field on June 1, 1943 (Envirodyne Engineers, Inc. [Envirodyne], 1985). NAAS Chase Field was used for flight training until 1946 and was decommissioned in 1947. In 1954, NAS Chase Field was recommissioned to serve as a jet training facility responsible for providing facilities, services, and material to support the jet pilot training program of the Naval Air Training Command (EnSafe/Allen & Hoshall [EnSafe], 1993b).

In July 1991, NAS Chase Field was listed for closure under the Base Closure and Realignment Act (DON, 1995). NAS Chase Field was decommissioned on February 1, 1993. Transfer of the property from the DON to the Texas Department of Criminal Justice (TDCJ) was initiated the same year (EnSafe, 1993b). The abandoned airfield includes three paved runways, extensive taxiways, ramps, and buildings (Trevet, 2016).

2.2 Historical, Current, and Future Land Use

The historical, current and future land uses for former NAS Chase Field are described in Sections 2.2.1 to 2.2.3.

2.2.1 Historical Land Use

A variety of industrial operations occurred at NAS Chase Field since its inception as an auxiliary portion of NAS Corpus Christi in 1943. NAS Chase Field was decommissioned in 1947 and remained inactive until 1953 when it was recommissioned as a jet training facility. In February 1993, the activity was decommissioned again. When NAS Chase Field was active, most of the industrial operations supported aircraft, ground vehicle, and base maintenance. NAS Chase Field was not involved in any heavy industrial or weapons production-type operations (NAVFAC, 1997).

The major commands and tenants at former NAS Chase Field included medical and dental services, administrative offices, commissary, convenient stores, weather services and aircraft maintenance training.

2.2.2 Current Land Use

Land use surrounding former NAS Chase Field includes rangeland, improved pasture, cropland, and urban land. The TDCJ operates a prison on the site and the local government is trying to redevelop the remainder of the base as the Chase Field Industrial Park (Trevet, 2016). The Beeville Development Authority (BDA) operates the land on Chase Field not associated with the prison (i.e., land not operated by TDCJ). Currently, FEMA uses approximately 30 acres around Hangar 24 and 12 acres outside of Hangar 26 to store temporary living facilities (Beeville Bee, 2017). Texas A&M also uses a portion of the land as a test range for unmanned research applications. Referred to as the Chase Field Range, Texas A&M's launch and recovery site operations utilize the existing runways and ground facilities. The City of Beeville owns approximately 26 acres on the eastern boundary of former NAS Chase Field. The city has installed four drinking water production wells, with another one currently planned for installation. Sampling was conducted at Production wells #1, #2, and #4 from 2017 to 2019; Production well #3 is planned for sampling in summer 2020; and Production well # 5 has not yet been installed.

2.2.3 Future Planned Land Use

The BDA is currently in the process of developing an economic program for Chase Field. Current facilities at former NAS Chase Field will continue to be used as TDCJ prison facilities, and leased to various tenants, including plans for a portion of the property to be used by Boeing (Beeville Bee Picuayne, 2017).

2.3 Environmental Data

Sections 2.2.1 through 2.3.6 describe the environmental characteristics of the installation.

2.3.1 Topography and Climate

Bee County is located within the West Gulf Coastal Plain. The land surface of Bee County slopes generally toward the coast and is moderately rolling and hilly in the northern part and nearly flat to slightly rolling in the southern part. The altitude of the land surface ranges from 80 feet above mean sea level (amsl) along the southeastern boundary of the county to about 500 feet amsl in the northern part. Drainage in Bee County is southeasterly (Envirodyne, 1985).

Former NAS Chase Field is centered on a topographic high that slopes southeastward approximately 20 feet per mile. Fine sandy to clayey loams contribute to rapid runoff from rainfall to topographically low areas. Runoff from former NAS Chase Field collects in an extensive drainage ditch system and channels into a large drainage ditch between the southeastern boundary of the installation and Spring Creek (United States Geological Survey [USGS], 1995).

Former NAS Chase Field is interconnected by a drainage ditch with Spring Creek, an intermittent creek approximately 1.5 miles southeast of the installation property line. Poesta Creek lies approximately 0.8 mile to the west of the installation but receives negligible runoff from former NAS Chase Field. Both of these creeks pass through rangeland and terminate at the Aransas River, 5 miles south of the installation (Envirodyne, 1985).

The climate of Bee County is dry and sub humid. Precipitation averages 29 inches per year and the average annual temperature is 71 degrees Fahrenheit (ºF) (NAVFAC, 1997).

2.3.2 Soils

Five soil types are found at former NAS Chase Field (United States Department of Agriculture [USDA], 2020). Soil descriptions obtained from Soil Survey of Bee County, Texas include the Clareville, Banquete, Orelia, Papalote, and the Weesatche soil types.

Clareville sandy clay loam (0 to 1 percent slopes) consists of deep, nearly level soil in shallow valleys and on low terraces. Typically, the surface layer is neutral, very dark gray sandy clay loam about 10 inches thick. Subsoil in the upper part, to a depth of 22 inches, is neutral, very dark gray clay. Subsoil in the middle part, to a depth of 32 inches, is mildly alkaline, grayish brown clay. Subsoil in the lower part, to a depth of 42 inches, is moderately alkaline, very pale brown clay loam. The underlying layer, to a depth of 60 inches, is moderately alkaline, very pale brown clay loam that has common soft masses and concretions of calcium carbonate. The soil is well drained. Permeability is moderately slow, and the available water capacity is high. Water erosion is a slight hazard (Envirodyne, 1985).

The Banquete clay (0 to 1 percent slopes) is a nearly level soil that is a few inches to a foot, or more, lower than the surrounding soils. It is moderately fertile, but if planting, tilling, or harvesting is delayed by wetness, yields are sometimes decreased. During dry years, however, yields on this soil may be higher than those on better drained soils. It consists of very deep, moderately well drained, very slowly permeable soils that formed in clayey fluviomarine sediments derived from the Beaumont Formation of Late

Pleistocene age. These nearly level soils are in open-ended shallow depressions and swales on flat plains on the South Texas Coastal Plain (USDA, 2014).

The Orelia fine sandy loam (0 to 1 percent slopes) is a deep soil on nearly level uplands. Typically, the surface layer is neutral, gray fine sandy loam about 6 inches thick. The subsoil extends to a depth of 30 inches. The subsoil is sandy clay loam that is dark gray in the upper part and gray in the lower part. The underlying layer, to a depth of 60 inches, is light gray sandy clay loam that has common soft masses and concretions of calcium carbonate. This soil is neutral in the upper part and moderately alkaline in the lower part. This soil is somewhat poorly drained. Permeability is very slow, and the available water capacity is medium. Water erosion is a slight hazard (Envirodyne, 1985).

The Papalote fine sandy loam (0 to 1 percent slopes) is a deep nearly level soil on uplands. Typically, the surface layer is grayish brown fine sandy loam about 11 inches thick. The upper part of the subsoil to a depth of 16 inches is dark grayish brown clay mottled with reds and browns. Below that, to a depth of 60 inches, the subsoil is sandy clay that is grayish brown in the upper part, light brownish gray in the middle part, and light brown in the lower part. The underlying layer, to a depth of 62 inches, is very pale brown sandy clay loam at has many soft masses of calcium carbonate. This soil is neutral in the upper part and moderately alkaline in the lower part. This soil is moderately well drained. Permeability is slow and the available water capacity is medium. Water erosion is a slight hazard (Envirodyne, 1985).

The Weesatche fine sandy loam (1 to 3 percent slopes) is a deep gently sloping soil on uplands. Typically, the surface layer is dark brown fine sandy loam about 8 inches thick. The subsoil to a depth of 25 inches is sandy clay loam brown in the upper part and reddish brown in the lower part. Below that, to a depth of 34 inches, the subsoil is reddish brown sandy clay loam that is about 20 percent soft masses and concretions of calcium carbonate. The underlying layer to a depth of 60 inches is very pale brown sandy clay loam that is about 25 percent soft masses, concretions, and threads of calcium carbonate. This soil is well drained. Permeability is moderate, and the available water capacity is high. Water erosion is a moderate hazard (Envirodyne, 1985).

2.3.3 Geology

The geologic formations that crop out near former NAS Chase Field consist of fluvial to fluvial-deltaic sediments of Tertiary and Quaternary age. The Tertiary system comprises the Fleming and Goliad Formations of Miocene age, which are composed of consolidated to unconsolidated sediments. The Quaternary system comprises the Lissie Formation of Pleistocene to Holocene age and alluvium of Holocene age. The Lissie

Formation, fluvial terrace deposits, and alluvium are all fluvial and stream terrace deposits composed mostly of clay, silt, sand, and gravel (USGS, 1995).

The Fleming Formation is composed predominantly of nonmarine, silty-to-sandy calcareous clays, and thick beds of sandstone deposited as fluvial, braided-to-meanderbelt facies, and interfluvial-interdeltaic floodbasin facies. The sandstone beds consist of fine- to medium-grained silica cemented quartz sand. Beneath former NAS Chase Field, the top of the Fleming Formation is approximately 270 feet below ground surface (bgs). The Goliad Formation unconformably overlies the Fleming Formation and crops out in an irregular band across central Bee County. The Goliad Formation consists of clay, sand, and sandstone, with chert conglomerates and caliche in the outcrop (USGS, 1995).

The Lissie Formation consists of thick beds of sand containing lens-shaped bodies of gravel, interbedded with silt and clay. The Lissie Formation unconformably overlies the Goliad Formation and is unconformably overlain by the Beaumont Formation. The outcrop of the Lissie Formation is approximately 25 miles wide in Bee County, underlying all of former NAS Chase Field and extending approximately 2 miles northwestward to southwest-to-northeast trending contact with the Goliad Formation. At former NAS Chase Field, the Lissie Formation is approximately 20 to 30 feet thick (USGS, 1995).

2.3.4 Groundwater

The Gulf Coast Aquifer and the local sub-unit aquifers underlying former NAS Chase Field, which include the Evangeline aquifer and two Fleming aquifers, are used for public water supply (Bee Groundwater Conservation District, 2018). The uppermost Fleming aquifer is referred to as the A-sand aquifer, and the lower aquifer is the B-sand aquifer. The A-sand aquifer is a sandstone unit approximately 20 feet thick that extends throughout the former NAS Chase Field area. The B-sand aquifer is a sandstone unit approximately 80 feet thick that can be correlated to wells in Beeville (approximately 5 miles west). The A-sand aquifer and B-sand aquifer are separated by a thick clayey confining unit approximately 100 feet thick. The depth to the water table ranges approximately from 0 to 30 feet bgs, depending on the topographic position (USGS, 1995).

Figure 2 presents the hydrological basins in the area of former NAS Chase Field; the water table coincides with land surface in Poesta Creek and is deepest on the crest of topographic highs. In general, groundwater in the shallowest part of the saturated zone moves from interstream areas toward streams, and the depth to water is greater along the divide between streams than it is beneath the flood plain. Therefore, under natural conditions, the shallowest groundwater at former NAS Chase Field moves toward

Poesta Creek on the western side of the installation and toward Medio Creek on the eastern side of the installation (USGS, 1995).

2.3.5 Surface Water

Former NAS Chase Field lies within the greater San Antonio-Nueces River Hydrolocial Basin, of which Spring Creek-Arkansas Basin is a subbasin. Surface drainage at former NAS Chase Field consists of a system of culverts and large, open, grassed drainage ditches. Runoff drains off base to the Heard drainage ditch at the southeastern corner of the base, which discharges to Spring Creek 1.5 miles southeast of the base. Spring Creek drains south to the Aransas River, which ultimately discharges to the Gulf of Mexico. A small area near the northern edge of the base drains to a drainage ditch along State Road 202 with discharge to Poesta Creek at a point about 0.8 mile west of the base. Poesta Creek drains southward and into the Aransas River. Secondarily treated effluent from the City of Beeville is discharged to Poesta Creek. There is an off-base area at the western corner of the base that could potentially drain onto the base. The Aransas River is classified by the State of Texas as Contact Recreation and High-Quality Aquatic Life.

2.3.6 Drinking Water Supply

Former NAS Chase Field historically obtained its water from six wells (Well 1, WSW1A, Well 2-old, WSW2, Well 3, and WSW4), which tapped the B-sand water-bearing unit within the Goliad Sand formation (USGS, 1995). Three of these wells (Well 1, Well 2-old, and Well 3) were reported as abandoned and/or plugged in 1978 (Envirodyne, 1985; USGS, 1995); and two are inactive (WSW1A and WSW4). Based on the Drinking Water Watch Report, well WSW2 is still active (TCEQ, 2020). However, field staff could not locate well WSW2 during site reconnaissance performed in June 2017 (Multi-Media Environmental Compliance Group [MMEC Group], 2019). According to information obtained from the Chase Field Water System Operator, only five water supply locations are in operation at former NAS Chase Field (Well 2, Well 5, Well 6, Tower 1, and Tower 2). Table 2-1 summarizes the drinking water wells identified at former NAS Chase Field and their current status. Figure 3 shows the wells located within 1-mile radius of the former NAS Chase Field installation boundary that were identified in the records search (Trevet, 2016). MMEC Group conducted a Drinking Water Survey which identified local public drinking water sources, completed a records survey of water wells, and completed a field survey in 2017 (MMEC Group, 2019). The well shown in bold are currently owned and operated by the TDCJ (MMEC, 2019).

Table 2-1: Former NAS Chase Field Well Status

Well ID	USGS Well Name	Tapped Formation	Status	Installed	Reference
Well 1	AW79-43-302	Unknown	Abandoned, plugged[1]	Unknown	Envirodyne, 1985
WSW1A	AW-79-43-308	B-sand (Fleming)	Inactive	2/6/1978	USGS, 1995
Well 2- old	NA	Unknown	Abandoned, plugged	Unknown	Envirodyne, 1985
Well 2	**AW-79-43-301**	**B-sand (Fleming)**	**Active**	**1943**	**MMEC Group, 2019**
WSW2	AW-79-43-309	B-sand (Fleming)	Active	10/31/1973	USGS, 1995
Well 3	NA	Unknown	Abandoned, plugged	Unknown	Envirodyne, 1985
WSW4	AW-79-35-908	B-sand (Fleming)	Inactive	2/6/1978	USGS, 1995
Well 5	**AW-79-35-912**	**A-sand and B-sand**	**Active**	**11/29/1997**	**MMEC Group, 2019**
Well 6	**AW-79-43-334**	**A-sand and B-sand**	**Active**	**1/2/1998**	**MMEC Group, 2019**
Tower 1	**NA**	**aboveground**	**Active**	**Unknown**	**MMEC Group, 2019**
Tower 2	**NA**	**aboveground**	**Active**	**Unknown**	**MMEC Group, 2019**

Notes:
1. Well 1 is noted in scanned documents obtained through the Texas Water Development Board (TWDB) Groundwater Database (GWDB) to have been "abandoned/USGS 11-2-93" and "plugged back to 557 feet."

Wells in **bold** are currently owned and operated by TDCJ.
ID = identifier; Envirodyne = Envirodyne Engineers, Inc.; MMEC Group = Multi-Media Environmental Compliance Group; NA = not applicable; USGS = United States Geological Survey

The City of Beeville, located about 4.5 miles northwest of former NAS Chase Field, switched from groundwater to surface water as its source of potable water in 1985. Water from Lake Corpus Christi, 39 miles southeast of Beeville, is transported via the Mary Rhodes pipeline. The City of Beeville's previous sources of potable water were from five wells ranging from 600 to 1,500 feet in depth, which provided a daily maximum production capacity of 3.5 million gallons of water with an average daily use of 2.8 million gallons (NAVFAC, 1981). The City of Beeville began the installation of five planned drinking water production wells (Production Well #1, Production Well #2, Production Well #3, Production Well #4, and Production Well #5) on the eastern boundary of former NAS Chase Field (Figure 3) in 2016. These wells were sampled as part of the Initial Assessment (MMEC Group, 2017a, b) and the sampling results are presented in Section 3. Wells #1 through #4 have been installed but are currently not supplying water to any population.

2.3.7 Description of Biological Resources

2.3.7.1 Ecosystems

Historically, the area was extensively an open treeless prairie predominated by a number of grass species and a variety of wildflowers. Prickly pear cactus (Opuntia

lindheimeri) and mesquite (Prosopis grandulosa), now prevalent, were present only in scattered shrubby growths. Trees were locally abundant along many of the rivers and creeks and often in formerly extensive woods. Calcareous soils found along dry slopes, promontories, and ridges harbored localized chaparrals of bushes and small trees (Envirodyne, 1985).

The continued pressure of cattle grazing and the reduction of prairie fires by local ranchers has led to the deterioration of the grassy climax plant communities and to a dramatic increase of thorny brush, shrubs, and cactus. The most conspicuous species among these include mesquite, spiney hackberry (*Celtis palilda*), prickly pear cactus, huisache (*Acacia farnesiana*), blackbrush (*Acacia rigidula*), granjeno (*Celtis pallida*), lotebush (*Ziziphus obtusifolia*), bluewood (*Condalia hookeri*), and woollybucket bumelia (*Bumelia lanuginosa*). What had been originally small scattered patches of thorny brush eventually encroached upon the grasslands to form brush-covered pastures and parks, requiring continued clearing efforts by cattlemen to maintain productive grazing areas (Envirodyne, 1985).

2.3.7.2 Flora

Bee County is now characterized by a number of different vegetation types. The immediate area surrounding Beeville is categorized as urban. The remaining portions of the county are characterized by four major vegetation designations. Cropland, with some mixture of grasslands, is the dominant type in the county, particularly to the south and west. Mesquite/Live Oak/Bluewood parks are characteristic of the eastern quarter of the county. A narrow fringe of the association known as the Post Oak Woods Forest and Grassland Mosaic extends from Goliad County, where it predominates, into Bee County along their common border. The Mesquite/Blackbrush Brush association characterizes central Bee County and is most representative of the vegetation in the vicinity of former NAS Chase Field. Much of the properties immediately adjacent to former NAS Chase Field are presently maintained as open grazing and pasture land with minimal agriculture (Envirodyne, 1985).

Poesta Creek, approximately 1 mile west of former NAS Chase Field, and the Aransas River, some 5 miles to the south, continue to provide diminished habitat for stands of hackberry (*Celtis laevigata*), ash (*Praxinus bertandieriana*), cedar elm (*Ulmus crassifolia*), and live oak (*Quercus virginiana*) (Envirodyne, 1985).

Vegetation at former NAS Chase Field properties consists primarily of open grassy cover surrounding the paved runways and building complexes. The constituent grass species used are buffelgrass (*Cenchrus ciliaris*), King Ranch bluestem (*Andropogon ischaeum*), Bermuda grass (*Cynodon dactylon*), and St. Augustine grass (*Stenotaphrum secundatum*). Native grasses, such as Texas winter grass (*Stipa leucotricha*) and Texas

cup grass (*Ericochloa sericea*), also persist at former NAS Chase Field. (NAVFAC, 1980).

Many wildflowers are still prevalent in the grassy areas surrounding the former NAS Chase Field. Noted during the March 2019 onsite survey were Indian paintbrush (*Castilleja indivisa*), crow poison (*Nothoscordum bivalve*), pink evening primrose (*Oenotherea speciosa*), violet wood sorrel (*Oxalis violacea*), and prairie verbena (*Verbena bipinnatofida*). Wine cups (*Callirhoe spp*.), phlox (Phlox SPP.1, blue curls (*Phacelia spp*.), coreopsis (*Coreopsis spp*.), blue bonnets (*Lupinus spp*.), and a variety of daisies and other forbs typical of the region are probably evident later in the spring and early summer (Envirodyne, 1985).

2.3.7.3 Fauna

The south Texas Brush Country encompassing former NAS Chase Field has the greatest faunal diversity in the state. This diversity is due, in part, to the abundant and diverse habitats offered by the region coupled with the climate, which allow both desert and near-tropical species to inhabit the area with more temperate species (Envirodyne, 1985).

The grassy areas and the surrounding environs of former NAS Chase Field appear to provide ample foraging habitat for a number of avian species. Some of the ground foragers and songbirds observed during the onsite survey included mourning dove (*Zenaida macroura*), meadowlark (Sturnella magna), red-winged blackbird (*AgelaiUS phoeniceus*), sandhill cranes (*Grus canadensis*), greater roadrunner (*Geococcyx californianus*), barn swallow (*Hirundo rustica*), loggerhead shrike (*Lanuis ludovicianus*), long-billed curlew (*Numenius americanus*), and American goldfinch (*Carduelis tristis*) (Envirodyne, 1985).

The northern harrier (*Circus cyaneus*) was commonly seen seeking prey along the grass areas fringing the runways. A single whitetailed kite (*Elanus leucurcis*) was also observed to readily use this habitat. Several other birds of prey were noted to frequent the areas near former NAS Chase Field; the red-tailed hawk (*Buteo jamaicensis*), the American kestrel (*Falco sparverius*), and the crested caracara (*Caracara cheriwav*) were the most conspicuous among these (Envirodyne, 1985).

The region harbors a wide variety of mammalians. The major species routinely associated with the habitats surrounding former NAS Chase Field include white-tailed deer (*Odocoileus virginianus*), peccary (*Pecari angulatus*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), armadillo (*Dasypus novemcinctus*), eastern cottontail rabbit (*Sylvilagus floridanus*),blacktail jackrabbit (*Lepus californicus*), eastern fox squirrel

(*Sciurus niger*), ground squirrels (*Citellus spp*.), striped skunk (*Mephitis mephitis*), and badger (*Taxidea taxus*). The mountain lion (*Felis concolor*) has been reported near former NAS Chase Field. During the onsite survey in March 2019, several jackrabbits were sighted foraging along the fence line at former NAS Chase Field; the cottontail rabbit and striped skunk were also observed locally (Envirodyne, 1985).

The herpetofauna most frequently reported to occur at former NAS Chase Field by base personnel were the western diamondback rattle snake (*Crotalus atrox*), Texas gopher tortoise (*Gopherus berlandieri*), the Texas indigo (*Drymarchon corais erebennus*), garter snake (*Thamnophis marcianus*), Taxas horned lizard (*Phrynosoma cornutum*), and occasionally Texas coral snake (*Micrurus fulvius tenere*). The American alligator (*Alligator mississippiensis*), now removed from the list of threatened and endangered species in Texas, is reported to occur in moderate numbers in Poesta Creek, the Aransas River, and portions of Spring Creek. Frogs are also known to be associated with the ponds and some of the drainages which occur at former NAS Chase Field (Envirodyne, 1985).

2.3.7.4 Wildlife

There are 25 species of animals in Texas that are presented on the United States Fish and Wildlife Service (USFWS) list of endangered or threatened species. Six of these species have the potential to be in the region of former NAS Chase Field. These six species include the swallow-tailed kite (*Elanoides Forficatus*), the white-tailed hawk (*Buteo Albicaudatus Hypospodius*), the Texas horned lizard (*Phrynosoma Cornutum*), the Mexican milk snake (*Lampropeltis Triangulum Annulata*), the Texas tortoise (*Gopherus Berlandieri*), and the Texas indigo snake (*Drymarchon Corais Erebennus*). The Texas Parks and Wildlife Department (TPWD) list of endangered and threatened species contains an additional 100 species not included on the federal listing. A total of 17 of these additional species are under consideration for Bee County and the surrounding regions (Envirodyne, 1985).

2.4 Potential Receptors

As noted in Section 2.2, future land uses at the former installation are expected to consist of a continuation of current land uses and some local development. Potential future receptors at former NAS Chase Field include hypothetical potential future residents, potential future commercial/industrial users (including base personnel), construction workers, and ecological receptors discussed in Section 2.3.7. Potential exposure media and pathways identified for these receptors include direct contact with soil, surface water, and groundwater.

Current human receptors on-base include TDCJ, BDA and civilian personnel, contractors/construction workers, authorized visitors, and unauthorized trespassers. While the area encompassing former NAS Chase Field does not have on-base housing, it does have a prison which maintains inmates year-round. However, the prison buildings are completely cut off (with fences) from the AOIs and they do not have access to the AOIs. Furthermore, although the prison uses wells for groundwater, as identified in Table 2-1, results of sampling of the wells in 2017 indicated no concentrations exceeding the U.S. EPA LHA/RSLs. Therefore, they are not listed as receptors in Table 5-3. Current ecological receptors include vegetative cover on the base and fauna that may feed, burrow, or nest at the site.

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3.0 Previous PFAS Investigations

Five sampling events (June 2017, October 2017, July 2018, December 2018 and January 2019) have been conducted at former NAS Chase Field to determine if PFAS was present in drinking water and groundwater. In addition, a U.S. EPA-led sampling event (see Section 3.1) occurred at the Morrill Water Plant in Beeville, Texas, from 2013 through 2015.

3.1 Prior U.S. EPA Investigations

U.S. EPA uses the Unregulated Contaminant Monitoring Rule (UCMR; U.S. EPA, 2012) to collect data on unregulated contaminants in drinking water. Every 5 years, U.S. EPA develops a list of UCMR contaminants. From 2013 through 2015, under UCMR 3, 30 listed contaminants were monitored, including PFOS and PFOA. Per UCMR 3 requirements, the DON was required to monitor for PFOA and PFOS in drinking water at installations throughout the United States. While monitoring was not specifically performed at former NAS Chase Field, PFAS sampling was conducted at the Morrill Water Plant (Facility ID 47660). No PFAS were detected at concentrations above their respective minimum reporting limits (MRLs) and all MRLs were below the current federal and state screening criteria (DoD, 2019; TCEQ, 2019).

3.2 Prior Groundwater Sampling

Samples from existing and temporary groundwater monitoring wells were collected from the following locations between October 4 and 5, 2017, in accordance with the Final Program and Installation-Specific Sampling and Analysis Plans (SAPs; MMEC Group, 2017a; MMEC Group, 2017b) using the modified U.S. EPA Method 537 (now referred to as PFAS by liquid chromatography and tandem mass spectrometry [LC/MS-MS] compliant with United States Department of Defense [DoD] Quality Systems Manual [QSM] Table B-15):

- One existing groundwater monitoring well (391085 [MW-1]) located less than 2,000 feet upgradient from Installation Restoration (IR) Site 3
- Three temporary groundwater monitoring wells (TMW-01 [03GW01], TMW-02 [03GW02], and TMW-03 [03GW03]) within IR Site 3
- Three temporary groundwater monitoring wells (TMW-01 [04GW01], TMW-02 [04GW02], and TMW-03 [04GW03]) within IR Site 4

All existing and temporary groundwater monitoring wells sampled at within or near IR Sites 3 and 4 are screened within the shallow, unconfined water table aquifer (Figure 2);

therefore, groundwater monitoring well samples collected are representative of the shallow, unconfined water table aquifer.

3.2.1 Analytical Results

PFAS were detected in all of the groundwater monitoring well samples collected and detections exceeded the screening criteria for several PFAS constituents (Table 3-1).

3.3 Prior Drinking Water Supply Well Sampling

3.3.1 Texas Department of Criminal Justice Wells

Selected water supply sampling locations corresponded to the following existing drinking water locations, where the TDCJ collects compliance samples for comparison with TCEQ drinking water standards:

- **Tower 1** – water tower that stores drinking water after it passes through the water system treatment. Tower 1 is closest to the effluent of the water treatment process.
- **Tower 2** – water tower that stores drinking water after it passes through the water system treatment.
- **Well 2** (well ID 79-43-301)
- **Well 5** (well ID 79-35-912)
- **Well 6** (well ID 79-43-334)

Six drinking water supply samples (five primary samples and one duplicate sample) were collected from five drinking water supply wells (Tower 1, Tower 2, 79-43-301 [Well 2], 79-35-912 [Well 5], and 79-43-34 [Well 6]) within the TDCJ water system on June 22, 2017 (Figure 2) in accordance with the Final Program and Installation-Specific SAPs (MMEC Group, 2017a; MMEC Group, 2017b). Drinking water samples were collected from locations and sampling ports where the TDCJ collects compliance samples. The samples were analyzed for PFAS using U.S. EPA Method 537 for comparison with the U.S. EPA LHA for PFOA and PFOS, the U.S. EPA RSL for PFBS, and applicable representative TCEQ PCL values.

3.3.2 Bee Development Authority Wells

The City of Beeville installed four drinking water production wells: Chase Field Production Wells (CFPWs) #1 through #4 (Figure 3) and one is currently planned for installation. Production wells #1, #2, and #4 were sampled in accordance with the Final

Program and Installation-Specific SAPs (MMEC Group, 2017a; MMEC Group, 2017b). Drinking water samples were analyzed for PFAS using U.S. EPA Method 537.

- CFPW #1 was installed in March 2016. One primary sample and one duplicate water sample were collected from CFPW #1 on October 5, 2017. Since a pump was not yet installed, a Snap Sampler was deployed on October 5, 2017, to approximately 550 feet bgs to collect one primary and one duplicate grab drinking water supply samples from CFPW #1 for PFAS analysis.
- CFPW #2 was installed in early December 2018. On December 20, 2018, one grab drinking water supply sample was collected from CFPW #2 for PFAS analysis.
- CFPW #3 was installed in December 2018 and, based on personal communication, has recently had a pump installed. This well is planned for sampling during the next mobilization (estimated Summer 2020).
- CFPW Well #4 was installed in December 2018 and it was sampled on January 17, 2019.

3.3.3 Private Wells

Samples were collected from ten private water supply wells (Private Well #1 through #10) on July 25 and December 6, 2018 (Figure 3) and were analyzed for PFAS by LC/MS-MS compliant with DoD QSM Version 5.1 Table B-15 or U.S. EPA Method 537 for drinking water.

3.3.4 Analytical Results

No PFAS were detected at concentrations above the analytical reporting limits in any of the drinking water supply samples collected from TDCJ water supply locations or BDA water supply locations (MMEC Group, 2019). Note that these reporting limits are less than the corresponding current DoD Screening Criteria (Table 3-1).

The Drinking Water Survey provides remaining analytical results (MMEC Group, 2019).

Table 3-1: Previous PFAS Investigations

Location	Site Name	Sample Date	PFOA (µg/L)	PFOS (µg/L)	PFBS (µg/L)
	DoD Screening Criteria[1]		0.04	0.04	40
TDCJ					
Tower 1	Tower1-DW-20170622	6/22/2017	0.00438 U	0.00438 U	0.00438 U
Tower 1	Tower1-DW-20170622FD (Parent: Tower1-DW-20170622)	6/22/2017	0.00454 U	0.00454 U	0.00454 U
Tower 2	Tower2-DW-20170622	6/22/2017	0.00443 U	0.00443 U	0.00443 U
7943301 (Well 2)	Well2-G0130002-DW-20170622	6/22/2017	0.00450 U	0.00450 U	0.00450 U
7935912 (Well 5)	Well5-G0130002-DW-20170622	6/22/2017	0.00439 U	0.00439 U	0.00439 U
7943334 (Well 6)	Well6-G0130002-DW-20170622	6/22/2017	0.00452 U	0.00452 U	0.00452 U
421648	Site 3-DW-421648-20171005	10/5/2017	0.00494 U	0.00494 U	0.00494 U
421648	DUP01_20171005 (Parent: SITE 3-DW-421648)	10/5/2017	0.00485 U	0.00485 U	0.00485 U
IR Site 3					
TMW-01 (03GW01)	Site 3-GW-03GW01-20171004	10/4/2017	**0.134**	0.00768 J	0.00586 J
TMW-02 (03GW02)	Site 3-GW-03GW02-20171005	10/5/2017	**0.472**	**0.155**	0.0447
TMW-03 (03GW03)	Site 3-GW-03GW03-20171005	10/5/2017	**9.33**	**0.221**	0.0532
391085 (MW-1)	Site 3-GW-MW1-20171005	10/5/2017	**0.230**	0.0232	0.0107
IR Site 4					
TMW-01 (04GW01)	Site 4-GW-04GW01-20171006	10/6/2017	**3.62**	**0.230**	0.179
TMW-02 (04GW02)	Site 4-GW-04GW02-20171004	10/4/2017	**0.582**	**0.0744**	0.0662
TMW-03 (04GW03)	Site 4-GW-04GW03-20171004	10/4/2017	**0.295**	0.00229 J	0.191
City of Beeville Drinking Water Production Wells					
CFPW #1	Site-3-DW-421648-20171005	10/5/2017	0.00494 U	0.00494 U	0.00494 U
CFPW #1	DUP01_20171005 (Parent: Site-3-DW-421648-20171005)	10/5/2017	0.00485 U	0.00485 U	0.00485 U
CFPW #2	PW2-122018-DW	12/20/2018	0.00508 U	0.00508 U	0.00508 U
CFPW #4	PW4-011719-DW	1/17/2019	0.00486 U	0.00486 U	0.00486 U

Notes:
1. Screening criteria for groundwater sample results follows "Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program" dated October 15, 2019.

Bold = exceeded screen criteria
µg/L = microgram(s) per liter; J = result estimated; PFBS = perfluorobutanesulfonic acid; PFOA = perfluorooctanoic acid; PFOS = perfluorooctane sulfonate; U = not detected at or above the laboratory limit of quantitation

4.0 Methodology and Findings

The purpose of this PA is to research and assess the potential release of PFAS from the use and storage of PFAS-containing substances within the former NAS Chase Field installation boundaries from 1940 to the present. Research conducted to document PFAS use at former NAS Chase Field was conducted through (1) online research on the use and storage of PFAS within the former installation boundaries, such as historical images and drawings, technical reports, property records, and news articles for documentation of any crash sites or aircraft fires, (2) archival records research and historical document review (e.g., Naval Installation Restoration Information Solution [NIRIS]) of military operations and site activities, (3) group discussion/kickoff meeting andinterviews of former NAS Chase Field personnel, and (4) review of current property and land use after installation closure. Interview Logs are provided in Appendix A and the Research Logs from relevant documents that were reviewed are provided in Appendix B.

AOIs where there is potential for materials known to contain PFAS include the following:

- Crash sites/ aircraft fires
- Firefighting training areas
- Plating operations
- Storage vessels/containers (underground storage tanks [USTs], aboveground storage tanks [ASTs], drums, buckets, and other miscellaneous containers) where AFFF concentrate or spent AFFF foam and water and materials known to contain PFAS were stored with or without secondary containment
- Areas where AFFF or materials known to contain PFAS use or release were documented via personnel interviews, environmental reports, electronic or print media.
- Areas where materials known to contain PFAS were handled, used, or released indoors

During the research, IR sites and other potential AOIs were identified and evaluated on the basis of how the area was used. The following guidelines aided in the assessment of each location.

Storage Area: An area where materials known to contain PFAS were stored in bulk. Identified storage containers/areas had to have contained one or more of the following materials:

- Materials known to contain PFAS

- AFFF concentrate
- Foam solution (foam and water mixtures)
- Spent AFFF and water mixtures (i.e., spent firewater after use and release)

Usage/Spilled Area: An area where materials known to contain PFAS were discharged intentionally or unintentionally. Discharges include the following instances:

- Materials known to contain PFAS were discharged intentionally (fire training exercises, plating operations, equipment testing, or firefighting activities)
- Materials known to contain PFAS were released unintentionally (e.g., discharges from fire suppression systems)
- Materials known to contain PFAS were released through transport mechanisms (aircraft washrack wastewater or overland flow to perennial surface water features or adjacent canyons)

Disposal Area: An area where materials known to contain PFAS were disposed of intentionally or unintentionally. Disposal areas include the following:

- Wastewater treatment plants (i.e., evaporation ponds and sludge beds)
- Landfills
- Disposal trenches

4.1 Online Research and Review of Records

The review of records included searches of the internet, the NIRIS database, and available historical documentation. All research was documented using the research logs (provided in Appendix B). As discussed in Section 1.0, the goal of the PFAS research is to identify AOIs where materials containing PFAS were potentially stored, handled, discharged, disposed of, or used at former NAS Chase Field, and to recommend AOIs for NFA for PFAS if no evidence of PFAS-containing materials were documented. To ensure that research activities were conducted sufficiently to fulfill these project objectives, a PFAS Research Checklist was used as a data quality tool to summarize the research activities discussed in Section 4.0. The completed PFAS Research Checklist is included in Appendix C.

MMEC Group conducted an internet search to obtain available records such as historical images and drawings, technical reports, property records, news articles, and other available or appropriate information to document the use of materials known to contain PFAS at former NAS Chase Field. Online research was conducted by searching general internet/news sites and databases. General internet/news was searched using

the following key words: “crash,” “fire,” “as-built,” “master plan,” “real property,” “mishap,” “PFAS,” “perfluorinated compound (PFC),” and “AFFF.”

The following online and/or records review resources were accessed for information:

- NIRIS – environmental documents and historical site and material use
- Texas Commission on Environmental Quality (TCEQ) – water well report viewer
- TCEQ Data and Records- Central File Room
- USGS – water supply well, water quality, and groundwater elevation information
- U.S. EPA – water quality information
- Aviation Safety Network – aircraft crash records

The NIRIS database was a primary source of information because it includes most, if not all, environmental documents for former NAS Chase Field. The online database was searched for documents that were subsequently searched for the following key words: “AFFF,” “electroplating,” “wastewater treatment/sludge area (ponds),” “firefighting training area,” “landfill,” “oil/water separators,” “vehicle wash station,” “drum or soil storage,” “fire suppression systems,” “airfield,” “crash,” and “fire.”

The information obtained during the research was evaluated to identify areas at former NAS Chase Field where materials known to contain PFAS were potentially stored, handled, discharged, disposed of, or used. Some fire-resistant aviation hydraulic fluids, photographic agents, and pesticides are known to contain PFAS. Areas where hydraulic fluid, photographic agents, and pesticides have been stored, used, spilled, or disposed of have been documented; however, the specific hydraulic fluid, photography agent, or pesticide, as applicable, that was noted at each area could not be verified to contain PFAS. Therefore, these areas are recommended for NFA at this time. This PA focused on known environmental releases of products that are confirmed to contain PFAS.

4.2 Summary of Findings from Initial Online Research and Review of Records

IR and SWMU sites are part of the former NAS Chase Field environmental cleanup programs, which are collectively referred to as the Environmental Restoration (ER) Program at former NAS Chase Field.

A news article was found which stated that a brush fire encompassing 640 acres occurred in or near the runway directly to the south of Interstate 202 (Beeville Bee, 2009). Based on the description in the article, it is likely that the runway being referred to is Runway 13L, on the northeast portion of the former NAS Chase Field installation. According to a news article, “compressed air foam trucks” responded to the incident.

Based on historical use of AFFF as fire suppressant for Class B fires, it is unlikely that "foam trucks" mentioned in the news article were used to extinguish a Class A brushfire. Therefore, it is unlikely for PFAS to be present and the area does not require further investigation. Further details on this incident are in Section 4.3.2.

Based on the initial online research and record review, which included all existing IR sites, AOIs, and SWMU sites that were identified in the NAS Chase Field Baseline Survey for Transfer (NAVFAC, 1997), the following five sites were initially identified as potentially affected by materials known to contain PFAS:

- IR Site 3 – Former firefighting training area (FFTA)
- IR Site 4 – FFTA
- IR Site 5 – Heard Ditch at Outfall to Adjacent Property
- AOI 1 – SWMU 83 – Alleged FFTA
- AOI 5 - North branch of SWMU 5

Additional sites were added to this list of sites once the interviews were conducted and additional information was provided, as described in Section 4.3.

4.3 Summary of Interviews

4.3.1 Group Discussion/

The installation-specific kickoff meeting for the PA for the Basewide Investigation of PFAS at former NAS Chase Field project was held on January 6, 2020. Attendees included the following:

- Kelli Miller — Multi-MAC JV Deputy Project Manager
- Kim Shiroodi — Multi-MAC JV Installation Lead
- Jim Callian — BRAC PMO Task Order Lead
- Dave Barney — BRAC PMO BRAC Environmental Coordinator (BEC) – former NAS Chase Field
- Todd Bober — BRAC PMO Remedial Project Manager (RPM) – former NAS Chase Field

During the group discussion, the PA process was discussed. A recommendation was made to contact the former Fire Chief Donald C. Morris, who is considered

knowledgeable about the use of AFFF and other potential PFAS containing materials at former NAS Chase Field.

4.3.2 Personnel Interviews

According to the DON, historical documentation of AFFF use and releases is often incomplete because records were historically not required. Therefore, in addition to document reviews, interviews are important to understanding past practices and identifying the potential for environmental releases (DON, 2017). Personnel interviews were initiated by providing a PFAS general information questionnaire to people who were likely to have knowledge of PFAS use. Subsequent conference calls were then conducted with each person who returned a completed questionnaire (Appendix A). The interview questionnaires helped confirm PFAS presence at the initial sites presented in Section 4.2. A questionnaire was mailed to the former Fire Chief on February 29, 2020, but a response was not received in time to be included in this PA Report. The questionnaire was completed by the following individuals knowledgeable regarding PFAS-related site history, activities, and current conditions:

- A Former Firefighter at NAS Chase Field

A summary of the interview is provided below.

Former Firefighter NAS Chase Field:

The former firefighter at NAS Chase Field identified six potential PFAS release areas:

- The firefighter training areas, IR Sites 3 and 4
- The application of AFFF to Runway 13L and Runway 17 to aid in the response to a crash landing of two aircraft whose landing gear was malfunctioning
- The location of the on-base fire station (Building 2142) off the parking apron next to the base operations building, which is also where truck washing took place and AFFF was stored
- The compass rose to the west of IR Site 3

The interview log is provided in Appendix A. Table 4-1 summarizes the interview with the former firefighter, and the sites for which he provided information. A follow-up phone interview was conducted with the former firefighter to clarify several statements provided in the general questionnaire. Regarding the application of AFFF to the runways for crash landings, the former firefighter stated that the AFFF was applied to the first 1,500 feet (approach) of the runways. He could not recall the dates of the incidents and indicated that the incident logs are not readily accessible. The former firefighter was asked about his knowledge of the brush fire in March 2009, and he

stated that he was one of the responders to the fire. Although the newspaper article indicated the use of "foam trucks," as stated in Section 4.2, the former firefighter clarified that the fire was a Class A fire and did not require the use of AFFF to extinguish. In addition, he identified the location of the brush fire as the grassy area between Runways 13 and 17. The location of the compass rose was noted as being just west of the control tower, and the Fire Department Building, where AFFF was potentially stored, was identified as Building 2142. The former firefighter confirmed that the fire trucks were filled and emptied with AFFF at Building 2142, but nozzle calibration was conducted at the compass rose. The former firefighter also noted that AFFF was never used to wash the fire trucks. In addition, the former firefighter recalled that no hangars had incidents where the fire suppression systems were triggered because of an emergency or malfunction. Based on the filling and emptying of AFFF into and out of the firetrucks, the Fire Department Building 2142 is recommended for further assessment.

Based on the findings from the interview, Multi-MAC JV identified or confirmed the following four areas with potential PFAS presence and/or usage:

- AOI 2: First 1,500 feet of Runway 13L
- AOI 3: First 1,500 feet of Runway 17
- AOI 4: Compass Rose (directly west of IR Site 3)
- AOI 6: Buildings 2142 and 2101 – Fire Department Storage

Also, based on the findings of the interview, Multi-MAC JV identified that the previously identified Brush Fire area is not an incident in which AFFF was known to be used, and therefore will not be recommended for further investigation.

Table 4-1: Personnel Interview Summary

#	Interviewee	Area(s) of Interest Identified or Confirmed
1	Former Firefighter at NAS Chase Field	• AOI 2: Runway 13L, AOI 3: Runway 17 AOI 4: Compass Rose, AOI 6: Fire Department Building (2142) • The firefight training areas, IR Sites 3 and 4

Acronyms:
AOI = area of interest; IR = Installation Restoration; NAS = Naval Air Station

5.0 Summary and Conclusions

Overall, a total of 133 potential AOIs for PFAS were initially identified during this PA. Those AOIs where further investigation may be warranted to determine the presence of PFAS are presented in Table 5-1, with their associated conclusions. . Those AOIs recommended for NFA for PFAS and the associated conclusions are included in Table 5-2.

The initial online research and record review identified five potential PFAS AOI on or associated with former NAS Chase Field, and personnel interviews and follow up research identified or confirmed an additional four AOIs. The list below shows the nine AOIs where further investigation may be warranted to determine the presence of PFAS, and their locations are shown on Figure 4.

- IR Site 3 – Former firefighting training area (FFTA)
- IR Site 4 – FFTA
- IR Site 5 – Heard Ditch at Outfall to Adjacent Property
- AOI 1 – SWMU 83 – Alleged FFTA
- AOI 2 – First 1,500 feet of Runway 13L – site of crash landing
- AOI 3 – First 1,500 feet of Runway 17 – site of crash landing
- AOI 4 – Compass Rose – alleged FFTA
- AOI 5 –North branch of SWMU 5
- AOI 6 – Buildings 2142 and 2101 – Fire Department Storage

A summary of potential migration pathways and potential receptors for each AOI where further investigation may be warranted to determine the presence of PFAS is included in Table 5-3.

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Table 5-1: Areas of Interest Where Further Investigation May Be Warranted – Former Naval Air Station Chase Field

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, Site Background and Transfer Status	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
IR Site 3	IR Site 3	Former Firefighter Training Area	1956-1972	IR Site 3 is located immediately west-northwest of the intersection of taxiways A and Y-2 and west of the air traffic control tower. The site consisted of two shallow, unlined, burning pits, each approximately 40 feet in diameter and 2 feet deep. The pits were used for training exercises from 1956 until 1972. Typically, waste liquids were transported to the site from the Public Works (PW) shops, AIMD, and the squadrons in bowsers or a 500-gallon tank truck. The liquids were then either drained directly into one of the pits, or if the pits were filled, drained into drums for later use. Practice fires were suppressed with a protein foaming agent and water. Over the time period the site was operational, it is estimated that 250,000 to 375,000 gallons of waste liquids were burned at the site. Waste liquids disposed of at the site included fuels, oils, cleaning solvents, waste paints and thinners. Most of the waste liquids burned at the site were consumed by fire. However, some residual liquids reportedly remained following the burns. The pits were covered with soil following closure which eliminated surface water runoff as a pathway for migration. This area was historically used as a firefighting training area that reportedly used AFFF as part of training. In addition, prior sampling was performed at this site, which resulted in detections of PFAS in shallow groundwater monitoring wells TMW-01 (03GW01), TMW-02 (03GW02) and TMW-03 (03GW03). The property where IR Site 3 was located was transferred to the City of Beeville on February 1, 1993.	NA	AFFF, protein foaming agent, waste fuels, waste oils, cleaning solvents, waste paints and thinners	Yes	The potential presence of PFAS at this site was initially based on historical activities and was subsequently confirmed by groundwater sampling in the 2017 Initial Assessment. The DON will proceed to an SI.	1,2,4,7
IR Site 4	IR Site 4	Former Firefighter Training Area	1972-1994	IR Site 4 is a former firefighting training area located approximately 400 feet southeast of the high-power turn-up facility along the east side of the dirt access road. The site is composed of two burn pits approximately 40 feet in diameter and 2 feet deep. One pit is 2 feet deep and marked by a grassy depression. The second pit was lined with concrete to improve liquid detention. Waste fuels and oils were used in the practice burns. The waste liquids collected at the PW shops, the AIMD and the squadrons were transported to the site in bowsers or a 500-gallon tank truck. Until the installation of a 6,500 gallon above ground storage tank at the site in 1975, the liquid wastes were either drained directly into one of the pits, or if the pits were filled, drained into drums for subsequent use. Practice fires were generally suppressed with a water fog and AFFF. Over period the site was operational, it is estimated that 280,000 to 375,000 gallons of waste liquids were been burned at the site. Waste liquids disposed of at the site included fuels, oils, cleaning solvents, waste paints and thinners. Most of the waste liquids burned at the site were consumed by fire. However, some residual liquids reportedly remained following the burns. The retention area and berms reduce the potential threat of surface water runoff being a major pathway for migration. However, some ponding has reportedly occurred adjacent to the area. Contaminated soil was excavated from the site in 1995 and land farmed or returned to the hole. TNRCC approved final closure of IR Site 4 under RRS2. This area was historically used as a firefighting training area that reportedly used AFFF as part of training. In addition, prior sampling was performed at this site, which resulted in detections of PFAS in shallow groundwater monitoring wells TMW-01 (04GW01), TMW-02 (04GW02) and TMW-03 (04GW03). The property where IR Site 4 was located was transferred to the City of Beeville on February 1, 1993.	NA	AFFF, waste fuels, waste oils, cleaning solvents, waste paints and thinners	Yes	The potential presence of PFAS at this site was initially based on historical activities and was subsequently confirmed by groundwater sampling in the 2017 Initial Assessment. The DON will proceed to an SI.	1,2,4,7
IR Site 5	IR Site 5	Heard Ditch at Outfall to Adjacent	Unknown	The drainage system at former NAS Chase Field consisted of culverts and large, open drainage ditches for surface runoff. In general, runoff drained from the northwest to the southeast to a confluence point at the upper end of Heard Ditch in the southeastern	NA	AFFF surfaced water runoff	Yes	The potential presence of PFAS is based on historical activities; further investigation may be warranted to determine its presence at this site.	2,7

Table 5-1: Areas of Interest Recommended for Further Investigation – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, Site Background and Transfer Status	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
		Property (closed in 1996)		corner of former NAS Chase Field. Heard Ditch drained into Spring Creek at a point about 1 mile southeast of the base. IR Site 5 is a portion of Heard Ditch which lies along the southeastern boundary of the property. Soil samples collected from the bottom of Heard Ditch did not indicate any concentrations of metals above RRS2 levels. TNRCC approved final site closure in 1996 under RRS2. However, the ditch remains functional and continues to receive surface runoff. The property where IR Site 5 was located was transferred to the City of Beeville on February 1, 1993.					
AOI 1	SWMU 83	Alleged FFTA (closed in 1992)	Mid-1950s - mid-1960s	This unit consisted of an alleged FFTA located approximately 600 feet east of Building 1016. The unit was reported to consist of an unlined pit approximately 30 feet in diameter. The area was an open field adjacent to a taxiway. Flammable liquids were supposedly burned at the SWMU from the mid-1950s to the mid-1960s as part of firefighter training exercises. The types of waste materials used, and the frequency of the exercises are unknown, but may have included hazardous solvents such as PD-680 and 1,1,1-trichloroethane, jet fuels, used oils and oily wastes. The property where AOI 1 was located was transferred to the City of Beeville on February 1, 1993.	NA	PD-680 and 1,1,1-trichloroethane, jet fuels, used oils and oily wastes	Yes	The potential presence of PFAS is based on historical activities; further investigation may be warranted to determine its presence at this site.	2,3,5,6,7
AOI 2	NA	NA	Unknown	The first 1,500 feet of Runway 13L. The property where AOI 2 was located was transferred to the City of Beeville on February 1, 1993.	Runway 13L	AFFF	Yes	The potential presence of PFAS is based on historical activities; further investigation may be warranted to determine its presence at this site.	8
AOI 3	NA	NA	Unknown	The first 1,500 feet of Runway 17. The property where AOI 3 was located was transferred to the City of Beeville on February 1, 1993.	Runway 17	AFFF	Yes	The potential presence of PFAS is based on historical activities; further investigation may be warranted to determine its presence at this site.	8
AOI 4	NA	NA	Unknown	Circular area west of the control tower. The property where AOI 4 was located was transferred to the City of Beeville on February 1, 1993.	Compass Rose	AFFF	Yes	The potential presence of PFAS is based on historical activities; further investigation may be warranted to determine its presence at this site.	8
AOI 5	NA	NA	1940s to present	Drainage ditches run along the western, eastern, and southern boundaries of former NAS Chase Field. This area is a portion of SWMU 5. The property where AOI 5 was located was transferred to the City of Beeville on February 1, 1993.	NA	AFFF	Yes	The potential presence of PFAS is based on historical activities; further investigation may be warranted to determine its presence at this site.	7
AOI 6	NA	Fire Department Storage	Unknown	This area included a Fire Department general storage area and flammable storage locker where AFFF foam trucks were filled and emptied. Grease and paint were observed on the floor. The property where AOI 6 was located was transferred to the City of Beeville on February 1, 1993.	Buildings 2142 and 2101	AFFF	Yes	The potential presence of PFAS is based on historical activities; further investigation may be warranted to determine its presence at this site.	8, 9

Notes:
a. Sites in **bold** will be evaluated in the PA Report per the NAVFAC SW Scope of Work.
b. Materials in **bold** may contain PFAS.

Acronyms:

AFFF = aqueous film-forming foam; AIMD = aircraft intermediate maintenance department; AOI = area of interest; FFTA = fire fighter training area; IR = installation restoration; NA = not applicable; PA = Preliminary Assessment; PFAS = Per- and polyfluoroalkyl substances; RRS2 = Risk Reduction Standard 2, per TNRCC guidelines; SWMU = solid waste management unit; TDCJ = Texas department of criminal justice; TNRCC = Texas Natural Resource Conservation Commission

Sources:

1. DON, 1992. Fact Sheet Base Closure. March
2. DON, 1995. Fact Sheet Chase Closure Report, NAS Chase Field, Texas. January.
3. Ensafe, 1993a. Final Facility Assessment Report. March.
4. Envirodyne, 1985. Initial Assessment Study, Naval Air Station, Chase Field, Beeville, Texas. September.
5. EPA, 1992. RCRA Facility Assessment Report with Transmittal. January.

Table 5-1: Areas of Interest Recommended for Further Investigation – Former Naval Air Station Chase Field (continued)

6. NAVFAC, 1992. Environmental Baseline Survey for Transfer Chase Park Housing with Transmittal NAS Chase Field TX. November.
7. NAVFAC, 1997. Final Environmental Baseline Survey for Transfer to Bee County Redevelopment Authority. April.
8. User Questionnaires are located in Appendix A.
9. NAVFAC, 1998. Final Closure Report for SWMU 49, NAS Chase Field, Beeville, Texas. January.

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Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
IR Site 1	IR Site 1	Northwest Landfill (closed in 1996)	1954-1983	IR Site 1 consisted of 18 acres on the northwestern corner of the base, 300 feet west of the small arms range. The area was used for dumping municipal garbage and industrial wastes from NAS Chase Field, including asbestos pipe insulation. Other wastes included oils, fuels, cleaning solvents, paints and thinners, concrete, and soil debris. Also, pesticide containers and other wastes items such as paper, cardboard, wood, garbage, and wastes from OWS and grease traps were disposed of. The landfill was capped in July 1995.	NA	Municipal solid waste and industrial wastes, oils fuels, cleaning solvents, paints and thinners, concrete, soil debris, pesticide containers, paper, cardboard, wood, and garbage and wastes from OWSs and grease traps	No	Although some commercial, industrial, and household waste may contain PFAS, there are no records or information indicating that products known to contain PFAS have been stored, disposed of, or released at this site.	2,5,6,7,15
IR Site 2	IR Site 2	Southeast Landfill (closed in 1996)	1965-1970	IR Site 2 consisted of 12 acres on the southeast corner of the base. The site contained a flat grassy field with a few small soil piles and surface irregularities. Solid wastes and some liquid wastes generated on-station were disposed of at the site. Weekly burning was routinely performed at the site. Wastes reportedly disposed of at this site included oils, fuels, cleaning solvents, paints and paint thinners. It is estimated that from 20,000 to 50,000 gallons of waste liquids were disposed of during the operational period of the site. In addition to such items as paper, cardboard, wood and garbage, the landfill was reportedly used for the disposal of empty pesticide containers and wastes from OWS and grease traps. The landfill was capped in July 1995.	NA	Oils, fuels, cleaning solvents, paints and paint thinners, paper, cardboard, wood garbage, empty pesticide containers, wastes from oil/water separators and grease trap wastes	No	Although some commercial, industrial, and household waste may contain PFAS, there are no records or information indicating that products known to contain PFAS have been stored, disposed of, or released at this site.	2,6,7,15
IR Site 6	IR Site 6	Water wells	1978 to present	Six water wells provide the entire water supply for Former NAS Chase Field. Wells 1, 1A, 2, 3, and 4 are located within the housing and support areas of the installation. Three of the wells are located at perimeter points on the activity: well 5 at the transmitter station; well 6 at the receiver station, and well 7 at the storage bunkers for high explosives. Water supply wells Well 2, WSW2, Well 5, Well 6, Tower 1 and Tower 2 are still in operation. The remaining wells have been abandoned or plugged and are no longer in operation.	NA	NA	No	Prior groundwater sampling resulted in no detectable PFOA, PFOS, and PFBS concentrations in groundwater that exceeded the detection limit.	2,11,15
AOI 7	SWMU 5	Base Drainage Ditches	1940s	SWMU 5 was a series of open ditches and culverts that collected stormwater and some industrial wastewater from the interior of the base and discharged the water to large ditches that formed a perimeter around the base. The perimeter ditches discharged off the base through Heard Ditch on the southern boundary of the base. SWMU 5 also received discharge from wash racks, OWSs and the former sewage treatment plant. One of the primary interior ditches that drained into the perimeter ditches is located in the northeastern quadrant of the base near Hangar 2015, the hazardous waste storage area, the former sewage treatment plant, and the garbage truck and dumpster wash racks. This ditch received stormwater runoff from all of these areas and discharges from the wash racks. The ditch also received wastewater discharge from the former sewage treatment plant prior to connecting the base to the local publicly owned treatment works (POTW).	NA	Stormwater and industrial wastewater	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,15

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 8	SWMU 6	Sanitary Sewer Lines	1940-1970	SWMU 6 consists of sanitary sewer lines throughout former NAS Chase Field. The system was built in the 1940s when the base was constructed, and it carried waste to the former sewage treatment system (SWMU 61) until approximately 1970 when the sanitary sewer lines were connected to the City of Beeville sewage treatment system.	NA	Sanitary sewage	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,15
AOI 9	SWMU 7	Dumpsters (closed in 1996)	Unknown	A set of 59 metal dumpsters staged northeast of Building 2980 were used by the DON to store common refuse,. Any remaining refuse in the dumpsters was disposed of before the dumpsters were removed from the site by Beck Brothers Oilfield Services, Inc. of Beeville for subsequent repair and reuse as common household refuse containers.	NA	Common refuse	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,15
AOI 10	SWMU 8	Ground Support Equipment (GSE) Solvent tank	1950s	The Aircraft Intermediate Maintenance Department shops were primarily located in Hangar 2137, since the construction of the hangar in 1970. AIMD performed intermediate-level maintenance on all aircraft and GSE assigned to Trawing Three (training air wing 3 at NAS Chase Field). AIMD consisted of six divisions: Air Frames, Armament, Avionics, GSE, Material Control, and Power Plants. Most of the waste-producing operations occur in the Airframes, GSE, and Power Plants divisions. Past disposal practices were fairly uniform among the AIMD shops. Flammable liquids, such as waste oil, fuel, solvents, and mixed paint wastes, were collected in 55-gallon drums or poured into waste storage tanks at the GSE shop. The GSE shop used 500-gallon waste oil bowsers to collect the liquid wastes from the shops, which were located in Building 1015 from the 1950s until 1970. The GSE shop in Building 2137 had two 500-gallon capacity USTs . One of the GSE tanks was used to store waste solvents and waste oil, and the other to store waste petroleum products. Segregation of the waste liquids, however, was not complete. The collected wastes were pumped out of the tanks and drums into a tank truck operated by the PW Transportation Department. The waste liquid was then transported to the FFTAs (Sites 3 and 4) to be burned during training sessions. This procedure was followed from the 1950s until 1980. In 1980, the Transportation Operations Department was replaced by a private contractor as the party responsible for pumping out the waste tanks and drums. While most of the liquid wastes generated on base were used during firefighter training (Sites 3 and 4), liquid wastes were also occasionally disposed of at the on-base landfills (IR Sites 1 and 2) prior to 1984. Beginning in 1984, with the implementation of the hazardous waste control program on station, the waste solvents generated by the shops were generated for disposal off station as hazardous wastes. Collection and disposal of waste oil and fuel remain essentially unchanged. SWMU 8 consisted of a painted steel AST containing PD-680 (Stoddard solvent) used for degreasing small parts associated with GSE shop vehicle maintenance activities. The unit was decontaminated by Environmental Group, Inc. in March 1993.	2137	Stoddard solvent, waste oil, fuel, solvents and mixed paint wastes	No	Although some aviation lubrication/hydraulic fluids may contain PFAS, there are no records or information indicating that lubrication/hydraulic fluids stored at the site contained PFAS and no releases of products known to contain PFAS have been documented. Based on interviews none of the fire suppression systems on base were triggered due to an emergency or malfunction.	2,7,8,14
AOI 11	SWMU 9	GSE former solvent tank	1980s	See SWMU 8. SWMU 9 was removed in the early 1980s. It consisted of five ASTs containing PF-680 (Stoddard solvent) and possibly Freon. The tanks were used for degreasing small parts associated with GSE shop vehicle maintenance. According to the base personnel, spills from the unit would have been picked up from the concrete floor using absorbent material. The waste solvents from the tanks flowed by gravity through piping to the GSE shop Waste Solvent Piping and underground storage tank (UST) (SWMU 10) and were later pumped out into bowsers and drums and sent to the present firefighter training area (FFTA) (SWMU 3) to be burned for firefighter training. Decontaminated by Environmental Group, Inc. in March 1993.	2137	Stoddard solvent, freon	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,7,8,14

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 12	SWMU 10	GSE Shop waste solvent piping and UST	1970-1980s	See SWMU 8. SWMU 10 consisted of waste solvent piping that received waste solvents from the GSE Shop Former Solvent Tanks (SWMU 9). Waste solvents reached the UST tank via gravity-fed underground piping. When the tank was full, the waste solvents were pumped out and taken to the present FFTA (SWMU 3) to be burned for firefighter training. Sometime before 1985, the piping was capped, and the unit was abandoned in place without the piping being flushed. The unit was closed in 1993.	2137	Waste solvent	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 13	SWMU 11	GSE Shop Waste Solvent Piping and UST	1970-1989	See SWMU 8. SWMU 11 is a 1,000-gallon UST that was used to collect waste oils generated by the GSE Shop. The unit was located about 6 feet outside the northwestern side of Building 2137, approximately 20 feet northeast of the GSE Shop Waste Collection Point (SWMU 13). At least as early as 1985, the waste oils were collected inside the GSE shop and manually poured into the unit through its manhole cover. Prior to this time, the waste oils may have been poured into underground piping (shown in blueprints of the GSE shop) through an inlet pipe of drain inside the GSE shop. When full, the tank contents were pumped out and transported to the Former FFTA (SWMU 4) where the waste oil was burned during firefighter training exercises. The unit was closed in 1993.	2137	Waste solvent	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 14	SWMU 12	GSE Shop Oily Rag storage	1970-1992	See SWMU 8. SWMU 12 consisted of a trash can used to collect rags used to wipe up small oil spills. The unit was located inside Building 2137, approximately 30 feet northwest of the GSE Shop Solvent Tank (SWMU 8). The spills are associated with the vehicle maintenance activities at the GSE Shop. The unit was emptied approximately once per day and the contents taken to accumulation point staging area (APSA) 3006 (SWMU 39). From APSA 3006 the wastes are taken to the Building 2980 Hazardous Waste Transfer Facility (SWMU 54) for off-base disposal. Base personnel assumed that wastes from the unit were probably disposed of in the Southeast Disposal Area (SWMU 1) or the Northwest Rubble Disposal Area (SWMU 2).	2137	Used oil	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 15	SWMU 13	GSE Shop Waste Collection Point (closed in 1996)	1989-1992	See SWMU 8. SWMU 13 consisted of metal drums and an area for miscellaneous items that managed miscellaneous wastes from the vehicle maintenance activities at the AIMD GSE Shop. The unit was located underneath a shelter adjoining the northwestern side of Building 2137, approximately 20 feet southwest of the GSE Shop Waste Solvent Piping and UST (SWMU 10) and the GSE Shop Waste Oil UST (SWMU 11). Base personnel state this unit was in operation since 1989. The unit occupied an area of approximately 5 feet by 20 feet. The contents of the all the drums and other waste containers were removed when full and taken to APSA 3006 (SWMU 39). Liquids in the drums were tested for the presence of chlorinated hydrocarbons using a method developed by Conetech. If chlorinated hydrocarbons were present, the drums were disposed of as chlorinated liquid waste. From APSA 3006 the wastes were taken to the Building 2980 Hazardous Waste Transfer Facility (SWMU 54) for contracted off-base disposal. Prior to 1989 waste solvents and oils were collected in the GSE Shop Waste Solvent Piping and UST (SWMU 10) and the GSE Shop Waste Oil Piping and UST (SWMU 11) for either off-base disposal or to be burned during firefighter training exercises. Base personnel do not know how the other wastes were managed prior to the existence of this unit. Specifically, this unit consisted of one 300-gallon drum for asbestos-containing wastes, one 550-gallon locked-top drum for waste oil, one 55-gallon drum for used oil absorbent, one 550 gallon locked-top drum for used antifreeze, and a steel tray holding miscellaneous waste transfer equipment. The 300-gallon metal drum managed asbestos-containing wastes such as brake shoes. The drum has a cover and was lined with a disposable plastic liner. The outside of the drum was marked "Warning: Asbestos Hazard." This drum sat in a 2-foot square, 1/2-inch deep stainless-steel tray, which rests on a concrete pad. Two of the 550-gallon metal drums managed liquid wastes. One drum managed non-specified waste oil, while the other managed waste antifreeze/coolant (typically ethylene glycol).	2137	Waste solvent, Freon, Stoddard solvent, oils, batteries, solder, antifreeze/coolant, brake shoes	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,10

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 16	SWMU 14	GSE Shop Oil/Water Separator	1970 - unknown	See SWMU 8. SWMU 14 is an OWS that separated oil from water that ran off the hangar deck and the other areas inside Building 2137. The OWS was intended to collect and separate oil from stormwater runoff of the hangar deck and other areas inside Building 2137. The wastewater was discharged to the stormwater drainage ditches (SWMU 5). The OWS began operation in 1970 and is currently inactive.	2137	Oils	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,14
AOI 17	SWMU 15	GSE Used Battery Storage	1970 - unknown	See SWMU 8. SWMU 15 consisted of a metal rack used for storing used lead-acid vehicle batteries while they were being recharged at the GSE Shop. This unit is immediately outside the GSE shop inside Building 2137. The unit was decontaminated by Morrison Knudsen Corporation in July 1995.	2137	Lead-acid batteries	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14
AOI 18	SWMU 16	Battery Shop (closed in 1992)	1970-1992	See SWMU 8. SWMU 16 consisted of battery shops in Building 2137 and contained shops 62C and 62D. No repair work has been done on the lead/acid batteries at the site. The new batteries were activated with acid for use in GSE equipment. Approximately 50 to 60 old lead/acid batteries per year were turned over to the Disposal Branch of the Supply Department and picked up by Defense Properties Disposal Office (DPDO) for resale. The acid was not drained from the batteries. Minor repairs were performed on the nickel/cadmium batteries, which have been used since 1975. Approximately the same number of nickel/cadmium batteries as lead/acid batteries were turned in to DPDO per year.	2137	Battery acid (nickel/cadmium and lead/acid)	No	Operations at the site did not involve materials known to contain PFAS. Therefore, no known releases of products containing PFAS are suspected.	2,7,8
AOI 19	SWMU 17	Soldering Station (closed in 1992)	1970-1992	See SWMU 8. This unit was a small room, called "Workstation 62B," where electronic equipment was repaired using lead and copper solder. The unit was located inside Building 2137 adjacent to the Building 2137 Battery Shop (SWMU 16) and the Avionics Shop. Inside the room was a 1 1/2-foot by 4-foot desk with soldering equipment. Over the working surface of the desk was a ventilation hood which vents to the roof of Building 2137. Base personnel indicated the ventilation hood did not have an air permit. Adjacent to the desk was a plastic lined metal trash can that received scrap lead and copper solder. The contents of the trash can were collected daily and emptied into one of the Dumpsters (SWMU 7). The contents of the on-base Dumpsters (SWMU 7) were taken off-base for disposal at the Beeville Municipal Landfill. Base personnel indicated that the unit is known to have been in operation since 1989, and a unit similar in function has been in use since 1970, although it may have been in a different location. Prior to the current off-base disposal of the dumpster contents, base personnel assumed the wastes were disposed of in the Southeast Disposal Area (SWMU 1l) or the Northwest Rubble Disposal Area (SWMU 2)	2137	Lead and copper solder	No	Operations at the site did not involve materials known to contain PFAS. Therefore, no known releases of products containing PFAS are suspected.	2,8
AOI 20	SWMU 18	Former Waste Oil UST (closed in 1992)	mid-1950s	See SWMU 8. This unit consisted of a 50,000-gallon steel UST) for waste oil. The unit was located approximately 200 feet southwest of the aviation gasoline (AVGAS) Piping and USTs (SWMU 82), and approximately 300 feet north of APSA 3004 (SWMU 76). The unit received waste oil from operations in Building 2137. The UST was installed in the mid-1950s and was originally used to replace the eight AVGAS USTs. It is unknown when its use switched from fuel to waste oil storage, according to base personnel. The UST was never pressure-tested. The UST had an asphalt coating and cathodic protection. Prior to the late 1980s, some of the oil was removed from the UST and burned at one of the on-base firefighter training areas. In approximately 1989, according to base personnel, an off-base contractor pumped all of the oil out of the UST and transported the waste directly off-base for fuels blending, and the UST was then removed. The excavation and the UST were completely decontaminated, and the UST was cut up and landfilled on-base at one of the two disposal areas. The results of an analysis of the waste oil in the UST indicated about 2,000 to 4,000 ppm of Freon, which base personnel believe came from hydraulic patch tests conducted at Building 2137.	2137	Waste oil, Freon	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 21	SWMU 19	CSD Shop Freon Degreaser and Drum (closed in 1996)	1970-1991	See SWMU 8. This unit was a Freon (trichlorotrifluoroethane) degreaser that was used to clean CSD generators and associated parts. The unit was located in the CSD Shop inside Building 2137 against the southeastern wall. The unit consisted of the above-ground degreaser tank, a ventilation hood, and a 10gallon drum for waste Freon solvent. The ventilation hood outlet was located on the roof of Building 2137, and there was no air permit for the hood. The waste Freon solvent collected in the 10-gallon drum was taken to APSA 3006 (SWMU 39) on approximately a biweekly basis. From APSA 3006 the wastes	2137	Freon	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,10

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
				were taken to the Building 2980 Hazardous Waste Transfer Facility (SWMU 54) for contracted off-base recycling or disposal. The 10-gallon waste solvent drum rested in a wheeled metal tray approximately 1 1/2 feet square by 1-inch deep. The tank, which measures approximately 3 feet by 4 feet by 3 feet deep, did not reportedly have a secondary containment system. The entire unit was cleaned biannually according to base personnel, who also indicated that the unit was permanently taken out of operation two weeks prior to the VSI on October 28-30, 1991. The unit had been in operation since 1970. Base personnel believe a unit similar in function may have existed before 1970 in one of the older hangars at the base. Prior to the current waste disposal practices, base personnel assumed that the wastes were disposed of in the Southeast Disposal Area (SWMU 1) or the Northwest Rubble Disposal Area (SWMU 2).					
AOI 22	SWMU 20	Welding Shop Stripping Station	Early 1980s to 1993	See SWMU 8. SWMU 20 consisted of one wet and two dry glass-bead honers and a 55-gallon drum of wet glass beads in the welding shop in Building 2137. This unit generated wet and dry silica (glass) beads used to strip paint. The beads are contaminated with cadmium as a result of the stripping process. The stripping process removes paint from various parts as a preparative step prior to welding. The parts are placed in a honer, and a stream of wet or dry beads is used to strip the paint off. In the honer, the wet stream of waste beads was funneled to a collection sump. The sump was scooped out monthly, and the beads were placed in a 55-gallon drum. The beads were taken off-base by a contractor for disposal. The unit was decontaminated by Environmental Group, Inc. in 1993.	2137	Waste beads	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14
AOI 23	SWMU 21	Aircraft Intermediate Maintenance Department (AIMD) Alodine Tanks and Drum (closed in 1996)	1970	See SWMU 8. This unit consisted of two shallow stainless-steel tanks used for cleaning small aluminum parts prior to painting. The unit was located in the Airframes Shop inside Building 2137, against the southeastern wall approximately 30 feet east of the AIMD Asbestos Worktable (SWMU 22). When facing the front of the unit, the tank on the right is used to wash the aluminum parts with a concentrated solution of alodine and chromic acid and the tank on the left holds water used to rinse the cleaning solution from the parts. At the time of the VSI on October 28-30, 1991 the wash tank was filled about 1 inch deep with the alodine-chromic acid solution, and the rinse was filled about 2 inches deep with water.	2137	Alodine -chromic acid solution	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 24	SWMU 22	AIMD Asbestos Worktable (closed in 1996)	1984-1996	See SWMU 8. This unit consisted of a table, with three metal side walls approximately 2 1/2 feet high, which was used to rework airframe and engine fittings that have asbestos insulation. The unit was located in the Airframes Shop inside Building 2137, against the southwestern wall, approximately 30 feet west of the AIMD Alodine Tanks and Drums (SWMU 21).	2137	Asbestos	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 25	SWMU 23	Power Plant Tric Cleaner Tank (closed in 1996)	1991	See SWMU 8. This unit consisted of an above-ground ultrasonic cleaner tank in the Power Plants room inside Building 2137. The unit was located approximately 30 feet northwest of the Power Plants Waste Collection Point 411 (SWMU 24), and along the northwestern wall of the Power Plants area. The ultrasonic cleaner tank used approximately 10 gallons of 1,1,1-trichloroethane (which base personnel call "Tric") as a solvent for cleaning parts. The unit generated a minimal amount of solvent waste (RCRA hazardous F00l). The unit was cleaned approximately once a year. This waste is placed in a 10-gallon drum, which was stored at the Power Plant Waste Collection Point 411 (SWMU 24). The waste later was taken to the Building 2980 Hazardous Waste Transfer Facility (SWMU 54), where it was stored awaiting final disposal or recycling off-base.	2137	1,1,1-trichloroethane	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,10
AOI 26	SWMU 24	Power Plant Waste Collection Point (PT) 411 (closed in 1996)	1991-1996	See SWMU 8. This unit was a collection area for wastes generated in several areas in the AIMD, including the collection point for the glass beads from the AIMD Welding Shop Stripping Station 51C (SWMU 20). The unit was located in the Power Plants room of AIMD in Building 2137, in the northeastern portion of the room, approximately 25 feet north of Power Plants Waste Collection Points 41A and 41F (SWMU 25). This unit managed cadmium-contaminated glass beads from the Welding Shop Stripping, Station 51C (SWMU 20), waste 1,1,1-trichloroethane from the ultrasonic Power Plants "Tric" Cleaner Tank (SWMU 23), and wastepaper from the Power Plants room.	2137	Wasted glass beads, 1,1,1-trichloroethane and wastepaper	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,7,8

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 27	SWMU 25	Power Plant Waste Collection PTs 41A and 41F (closed in 1996)	1970-1996	See SWMU 8. This unit was a collection area for wastes generated during aircraft engine maintenance. The unit was located in the Power Plants room of AIMD in Building 2137, in the southeastern portion of the room approximately 25 feet south of Waste Collection Point 411 (SWMU 24). The unit consisted of two 10-gallon bunghole drums for waste aircraft engine oil, a 10-gallon clamped-top drum for oily rags, and a 1-cubic-yard cardboard box for asbestos wastes. Also stored at this unit were small (approximately 5 gallons each) buckets used to transport waste oil to this unit. The two 10-gallon bunghole drums were used exclusively for waste aircraft engine oil. The shop also used a dip tank containing PD-680 to clean engine parts. A small quantity of waste JP-4 and engine oil were produced during engine testing. Although the type of engines maintained by the Power Plants Division changed over the years, the basic waste generating operations remained essentially the same.	2137	PD-680, JP-4, and engine oil	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,7,8
AOI 28	SWMU 26	Hydraulic Shop Solvent Tanks	1970	See SWMU 8. The unit consisted of three steel tanks used in degreasing operations in the AIMD hydraulics shop inside Building 2137, along with a hood to ventilate the area above the tanks. These tanks contained Freon and PD-680 (Stoddard solvent). The concrete floor beneath the tanks was in good condition during the inspection conducted October 28-30, 1991. The unit was decontaminated by Environmental Group, Inc. in March 1993.	2137	Freon and Stoddard solvent	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14
AOI 29	SWMU 27	Hydraulic Shop Waste Collection PT	1970	See SWMU 8. The unit was a collection point for waste generated by aircraft maintenance operations conducted in the AIMD shop in Building 2137. The unit consisted of three 10-gallon drums containing Freon, PD-680, and oily rags. The unit was decontaminated by Environmental Group, Inc. in March 1993.	2137	Freon, Stoddard solvent and rags	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14
AOI 30	SWMU 28	Hydraulic Shop Scrap Metal Collection Area	1970	See SWMU 8. The unit was a collection area for scrap metal wastes generated by aircraft maintenance operations in the Hydraulics Shop at Building 2137. The unit consisted of two lidded, 30-gallon steel trash cans containing scrap aluminum and steel which were sold and shipped off-base for recycling. The unit was decontaminated by Environmental Group, Inc. in March 1993.	2137	Scrap aluminum	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 31	SWMU 29	Hydraulic Shop OWS (2)	1970	See SWMU 8. The unit consisted of two OWS outside the western wall of the Hydraulics Shop in Building 2137. The unit managed oily waste and runoff from Hangar 2137 and flow from the berm drains of the tire/engine cleaning shop. The unit was decontaminated in December 1992 by Environmental Group, Inc.	2137	Oily waste and runoff	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,14
AOI 32	SWMU 30	Nondestructive Inspection (NDI) Magnaflux Machine Waste Collection PT	1970	See SWMU 8. Unit was at AIMD Work Center 530 in the NDI room of Building 2137. The unit consisted of a 55-gallon drum in which waste “Zyglo” from the NDI Magnaflux machine accumulated. The "Zyglo" solution was used in the Magnaflux machine to check for cracks and stresses in aircraft components. The unit was decontaminated by Environmental Group, Inc. in April 1993.	2137	Zyglo	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14
AOI 33	SWMU 31	NDI Magnetic particle Station Waste Collection PT	Unknown	See SWMU 8. The unit collected waste solution from the NDI Magnetic Particle Station. The unit was in the NDI room of Building 2137. The unit consisted of a 55-gallon drum in a stainless-steel drip pan. The unit was decontaminated by Environmental Group, Inc. in April 1993.	2137	Iron and titanium dioxide wastes	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14
AOI 34	SWMU 32	NDI Darkroom Waste Accumulation Area	Unknown	See SWMU 8. The unit consisted of a filter, drum and associated tubing that collects waste photographic developer and fixer. The unit was within the NDI Darkroom inside Building 2137. The unit managed waste photographic developer and fixer solutions and was decontaminated by Environmental Group, Inc. in April 1993.	2137	Photo processing chemicals	No	Some photography agents are known to contain PFAS. However, it is unknown whether the photography agents stored and used at the site contained PFAS and no known release of photography agents have been documented.	2,8,14
AOI35	SWMU 33	Tire Engine Cleaning Shop Vats and Tank	Unknown	See SWMU 8. The unit consisted of nine vats and two ASTs used for cleaning aircraft tires and engines in the tire/engine cleaning shop in Building 2137. Wastes generated included acid, alkaline solution, carbon remover, solvents, aircraft soap solution and rinse water. The unit was decontaminated by Cibolo Consulting & Remediation, Inc. in March 1993.	2137	Acid, alkaline solution, carbon remover, solvents, aircraft soap solution and rinse water	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14
AOI 36	SWMU 34	Tire Engine Cleaning Shop Waste Acid Piping/UST	1975-1985	See SWMU 8. This unit consisted of an abandoned UST and piping that received waste acid from the Tire/Engine Cleaning Shop Vats and Tanks (SWMU 33) in Building 2137. The UST passed the pressure test when it was taken out of service in 1989. The piping was never tested and was disconnected from the UST prior to the pressure test. The unit was closed in 1993.	2137	Acid, alkaline solution, carbon remover, solvents, aircraft soap solution and rinse water	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 37	SWMU 35	Tire Engine Cleaning Shop Waste Solvent Piping/UST	1975-1985	See SWMU 8. This unit consisted of an abandoned UST and piping that received waste solvent from the Tire/Engine Cleaning Shop Vats and Tanks (SWMU 33) in Building 2137. The UST failed the pressure test when it was taken out of service in 1989. The piping has never been tested and was disconnected from the UST prior to the pressure test. The unit was closed in 1993.	2137	Acid, alkaline solution, carbon remover, solvents, aircraft soap solution and rinse water	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 38	SWMU 36	Tire Engine Cleaning Shop Waste Carbon Remover Piping/UST	1975-1985	See SWMU 8. This unit consisted of an abandoned UST and piping that received waste solvent from the Tire/Engine Cleaning Shop Vats and Tanks (SWMU 33) in Building 2137. The UST passed the pressure test when it was taken out of service in 1989. The piping was never tested and was disconnected from the UST prior to the pressure test. The unit was closed in 1993.	2137	Acid, alkaline solution, carbon remover, solvents, aircraft soap solution and rinse water	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 39	SWMU 37	Tire Engine Cleaning Shop Waste Alkaline Piping/UST (closed in 1993)	1975-1985	See SWMU 8. This unit consisted of an abandoned UST and piping that received waste solvent from the Tire/Engine Cleaning Shop Vats and Tanks (SWMU 33) in Building 2137. The UST failed the pressure test when it was taken out of service in 1989. The piping was never tested and was disconnected from the UST prior to the pressure test.	2137	Acid, alkaline solution, carbon remover, solvents, aircraft soap solution and rinse water	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 40	SWMU 38	Waste Oil UST and OWS	1985	SWMU 38 is also listed as underground storage tank 2166-A, and consisted of an OWS and a 550-gallon waste oil tank at the fuel truck parking circle at Building 2166. The unit was approximately 200 feet northwest of the Hangar 2015 wash rack. The unit received runoff from storms and large vehicle maintenance operations at the fuel truck parking. Unit was decontaminated by Remedial Construction Services, Inc. in March 1993.	2166	Waste oil	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,14
AOI 41	SWMU 39	APSA	1987	SWMU 39 consisted of a partially enclosed aboveground structure used to store hazardous and nonhazardous waste generated on-base. The unit is located approximately 40 feet north of the Building 2066 Piping and OWS (SWMU 44), and adjacent to the Former Waste Storage at APSA 3006 (SWMU 40). Building 2066, associated with Building 3006, was an accumulation point staging area on the building's northeastern side for corrosive and flammable storage. Paints, strippers, solvents, carbon-removing compound, corrosion inhibitor and Freon were stored in Building 2066.	2066, associated with 3006	Paints, strippers, solvents, carbon-removing compound, corrosion inhibitor and Freon	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,9,15
AOI 42	SWMU 40	Former Waste Storage at APSA (closed in 1992)	1985-1987	See SWMU 39. The unit was located where APSA 3006 (SWMU 39) now exists. The unit stored wastes from the AIMD, including the GSE Shop, CSD Shop, Power Plants room, Hydraulics Shop, and Paint Shop. These wastes were similar to the wastes currently stored in APSA 3006 (SWMU 39).	2066, associated with 3006	Paints, strippers, solvents, carbon-removing compound, corrosion inhibitor and Freon	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 43	SWMU 41	Stripper Tanks (closed in 1996)	1970	This unit consisted of a room in the paint Shop (Building 2066) where GSE parts (e.g., vehicle wheels) were stripped of paint and rinsed. The unit was located approximately 30 feet northeast of the Building 2066 Spray Booth (SWMU #43), and approximately 20 feet southwest of APSA 3006 (SWMU 39). The unit managed wastes resulting from stripping paint from GSE components. Several interior stripper tanks, including a 110-gallon tank of methylene chloride, were observed during the Building Visual Site Inspection (VSI).	2066	Methylene chloride and, waste paint sludge (metals)	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,10,15
AOI 44	SWMU 42	Asbestos Collection Drum (closed in 1996)	1985	This unit consisted of an asbestos collection drum within Building 2066. The unit was located approximately 5 feet southeast of the Building 2066 Spray Booth (SWMU 43), and approximately 30 feet southwest of the Building 2066 Stripper Tanks (SWMU 41). The unit received asbestos and asbestos-containing waste from AIMD shops including the GSE Shop, Air Frames Shop, Ordnance Shop, Avionics Shop, and Power Plants room.	2066	Asbestos	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,15

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 45	SWMU 43	Spray Paint Booth (closed in 1996)	1970	This unit consisted of a spray booth located within Building 2066. The unit was located approximately 5 feet northwest of the Building 2066 Asbestos Collection Drum (SWMU 42), and approximately 30 feet southwest of the Building 2066 Stripper Tanks (SWMU 41). The unit generated waste paint from aerosol paint cans, dried paint waste, and cadmium-contaminated paint filters. The spray booth was used several times per week according to base personnel. The floor of the booth was lined with paper to catch paint drips. The booth was equipped with an exhaust fan that drew the air in the spray booth through cardboard filters before venting to the atmosphere on the top of Building 2066. The filters were changed approximately four times per year along with the paper on the floor.	2066	Paint from aerosol paint cans, dried paint waste, and cadmium-contaminated paint filters	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,10,15
AOI 46	SWMU 44	Piping and oil/water separator	1970	This unit consisted of an OWS and piping associated with Building 2066. The unit was located approximately 30 feet south of APSA 3006 (SWMU 39), and approximately 300 feet west of the Tire/Engine Cleaning Shop Vats and Tanks (SWMU 33). The piping connected Building 2066 to the OWS, which traps solids from the waste stream and allowed liquids to pass to the Sanitary Sewer Lines (SWMU 6). The OWS was constructed of concrete and consisted of two compartments, each approximately 4 feet by 4 feet by 4 feet deep. The separator appeared to be in good condition during the VSI conducted on October 28-30, 1991, although the unit's integrity has never been tested. In 1993 the unit received runoff water from an emergency shower. Prior to 1986, the unit received waste from a drain in the proximity of the Building 2066 Stripper Tanks. The wastes consisted of methylene chloride and paint sludge. The unit was decontaminated by Everest Environmental Services Corporation, Inc. in 1994.	2066	Methylene chloride and paint sludge	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,14,15
AOI 47	SWMU 45	PW Sawdust Collection Area (Transferred to Texas Department of Criminal Justice [TDCJ])	1975	The PW Department was responsible for the general maintenance of roads, grounds and buildings at NAS Chase Field. The Utilities Division maintained the potable water supply wells and distribution system, and at one time operated both water and wastewater treatment facilities. The PW Department offices were located in Building 2048 (constructed in 1957) with shops nearby in Buildings 1046, 1037, 1003 and 1004 (all constructed in 1943). The PW shops were grouped into three divisions: Maintenance, Transportation and Utilities. The Maintenance division was composed of five shops that generated hazardous waste: The Carpenter Shop, the Pest Control Shop, the Electric Shop, the Paint Shop and the Pipe Shop. The Utilities Division office was located in Building 2048. This unit consisted of a steel funnel and a steel hopper for collecting sawdust from the PW's Carpentry Shop. The unit is located approximately 150 feet northeast of the PW Waste Paint Collection Area (SWMU 46), and approximately 200 feet east of the Construction Battalion (CB) Sawdust Collection Area (SWMU 101). The unit received sawdust from carpentry activities in the PW Carpentry Shop. The sawdust was vacuumed off the various wood-working machinery and sent through overhead conduits to the funnel that was located immediately outside of the Shop on the northwestern side of Building 2048. Wastes generated by the shop included mixed paint and thinner, scrap lumber, shingles, floor tile and other building materials. From the mid-1950s until 1984, the painters and carpenters hauled their wastes to the landfills (IR Sites 1 and 2).	2048	Mixed paint and thinner, scrap lumber, shingles, floor tile and other building materials	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,7,8
AOI 48	SWMU 46	PW Waste Paint Collection Area (transferred to TDCJ)	1988	This unit consisted of two 55-gallon drums used to collect of waste paint at PW Building 1046. The unit was located approximately 100 feet south of the PW Sawdust Collection Area (SWMU 45), and approximately 100 feet southeast of the Building 1046 Vehicle Wash rack OWS (SWMU 49). The unit received waste paint from various PW operations. The waste was brought to the unit as it was generated at the various operations. One drum received waste paint from cans and was filled about twice a year. The other drum was for draining cans of spray paint and was filled less frequently.	1046	Waste paint	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,7,8,10
AOI 49	SWMU 47	PW Former Paint Collection Area (transferred to TDCJ)	1958-1988	See SWMUs 45 and 46. Specifically, SWMU 47 was located approximately 10 feet southwest of the present PW Paint Collection Area (SWMU 46) and approximately 100 feet south of the Building 1046 Wash rack OWS (SWMU 49). The unit consisted of a concrete and grass area formerly used for the collection and storage of waste paint. Stains were noticeable on the concrete in the area during the VSI conducted on October 28-30, 1991.	1046	Waste paints	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 50	SWMU 48	PW Battery Shop (transferred to TDCJ)	mid-1940s-1970	See SWMU 45. This unit consisted of a sink in Building 1046 that might have-received battery acid in the past. The unit was located approximately 30 feet north of the Building 1046 Parts Cleaner Tanks (SWMU 52). The unit was constructed in the mid-1940s and consisted of a single-basin lead sink. The basin measured approximately 1 foot by 2 feet by 1 foot deep. From 1944 until 1970, the sink might have received battery acid from leaking lead acid batteries. During this time, the sink was partially filled with sodium bicarbonate (baking soda), similar to the sink in the Building 2137 Battery Shop (SWMU 16). The sink drain led to the Sanitary Sewer Lines (SWMU 6)	1046	Lead acid batteries	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 51	SWMU 49	Vehicle Wash Rack OWS (transferred to TDCJ)	1940s - 1993	SWMU 49 consisted of the Building 1046 vehicle wash rack OWS located approximately 30 feet south of Building 1046. The unit consisted of an OWS that received wastewater from the vehicle wash rack on the southern side of Building 1046.	1046	Waste oils	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,16
AOI 52	SWMU 50	Waste Oil UST (transferred to TDCJ)	1974-1988	SWMU 50 is a former waste oil UST located approximately 10 feet southwest of Building 1046. The unit consisted of an UST that received waste oil from Building 1046. Minor spills during filling and emptying were reported and soil in the vicinity of the unit was stained.	1046	Waste oils	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8
AOI 53	SWMU 51	OWS (transferred to TDCJ)	1940s – present	SWMU 51 is an OWS located approximately 5 feet south of Building 1046. The OWS received runoff from vehicle maintenance operations within Building 1046 and outside precipitation. The unit was constructed of concrete and was approximately 3 feet in diameter and 8 feet deep.	1046	Stormwater runoff and waste oils	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8
AOI 54	SWMU 52	Parts cleaner Tank (transferred to TDCJ)	mid-1940s	See SWMU 45. This unit consisted of four parts cleaner tanks inside Building 1046. The unit was located approximately 20 feet northeast of the Building 1046 Former Waste Oil UST (SWMU 50), and approximately 20 feet east of the Building 1046 Waste Accumulation Area (SWMU 53). The four tanks were used for cleaning small parts from government vehicles maintained in the PW Transportation Building (Building 1046). The solvent used was PD.680 (Stoddard solvent). Each tank held approximately 10 gallons, and approximately 10 gallons of solvent were used each year for all four tanks. The tanks were cleaned out twice per year according to base personnel, although most of the waste was sludge from evaporation of most of the solvent. The waste from the tanks was placed in the waste oil drum in the Building 1046 Waste Accumulation Area (SWMU 53). From there it was sent to the Building 2980 Hazardous Waste Transfer Facility (SWMU 54) where it was shipped off base for fuel blending, according to base personnel.	1046	Potential solvents, such as trichloroethylene	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,10
AOI 55	SWMU 53	Waste Accumulation Area (transferred to TDCJ)	1980-unknown	See SWMU 45. This unit consisted of a roofed and fenced in area on the northwestern side of Building 1046. The unit was located approximately 20 feet northeast of the Building 1046 Former Waste Oil UST (SWMU 50), and approximately 35 feet north of the Building 1046 Vehicle Wash rack OWS (SWMU 49). This unit managed waste from the PW shops in Building 1046.	1046	Potential waste oils, batteries, and paints	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,10
AOI 56	SWMU 54	Hazardous Waste Transfer Facility (transferred to TDCJ)	1986-unknown	This unit consisted of a partially enclosed above-ground structure used for the storage of hazardous and nonhazardous waste generated on-base. The unit was located approximately 50 feet west of the Sanitary Sewer Lift Station (SWMU 60) and 100 feet southwest of the Sludge Beds (SWMU 62). The structure stored wastes generated by base activities for 90 days or less.	2980	Polychlorinated biphenyl (PCB) transformers, used batteries, waste paints, asbestos-containing wastes, solvents such as PD-680, Freon, and methylene chloride, solvent contaminated wastes such as rags, and waste oils.	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,10

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 57	SWMU 55	PCB Transformer Storage Area (closed under RRS3)	1966-unknown	SWMU 55 was located approximately 70 feet northwest of Building 2980 Hazardous Waste Transfer Facility (SWMU 54) and approximately 150 feet southwest of the Sludge Beds (SWMU 62). The unit consisted of a concrete pad for PCB transformer and other waste storage, including 5-gallon containers and wooden pallets. Wastes were stored on wooden pallets and reportedly removed from the pad within 120 days to off base. Prior to being used as a PCB transformer storage area, the pad was used to store crash parts from jets from approximately 1966 to 1981.	Near 2980	PCBs	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,3,4,8
AOI 58	SWMU 56	Former Waste Oil Storage (closed under RRS3)	1987-1990	SWMU 56 was located approximately 30 feet north of the PCB Transformer Storage Near Building 2980 (SWMU 55) and approximately 130 feet northwest of the Sludge Beds (SWMU 62). The unit consisted of a grassy area that was used to store 55-gallon waste oil drums. Other wastes included Freon and hydraulic fluid. The waste drums were brought to the site as they were filled at other facilities on base and then removed by a private contractor.	Near 2980	Waste Oil	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,3,4,8
AOI 59	SWMU 57	Former HW Storage (closed under RRS3)	1985-1987	SWMU 57 was located approximately 100 feet southwest of the Former Waste Oil Storage Building 2980 (SWMU 56), and approximately 90 feet west of the PCB Transformer Building 2980 SWMU 55). The unit consisted of an asphalt pad upon which 55-gallon drums of hazardous wastes were stored. Such wastes included waste paints, hydraulic fluid, paint strippers, waste solvents and scrap metals. Wastes were brought to the area as they were filled at various base facilities and were stored on wooden pallets on the asphalt or in drum racks on the asphalt before being removed by a private contractor.	Near 2980	Aster paints, hydraulic fluid, paint strippers, waste solvents and scrap metals	No	Although some aviation lubrication/hydraulic fluids may contain PFAS, there are no records or information indicating that lubrication/hydraulic fluids stored at the site contained PFAS and no releases of products known to contain PFAS have been documented.	2,3,4,8
AOI 60	SWMU 58	Former FFTA Waste Oil Tank Area (decontaminated- closed in 1996)	1969-1989	SWMU 58 was located approximately 50 feet southeast of the active fire fighter training pit at the FFTA (SWMU 3). The unit consisted of a grassy area upon which two waste oil tanks were located. Waste oil was transferred to the tanks from various base facilities and stored until needed for firefighting exercises. An original above ground tank was in operation between approximately 1969 and 1989 until it was needed for firefighting exercises. A second above ground tank of fiberglass construction with a capacity of 6500-gallons was then installed and subsequently ruptured upon being filled for the first time. The tank was then removed, and the site rendered inactive.	Near 2980	Waste Oil	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,3,4,8,14
AOI 61	SWMU 59	Garbage Truck Wash Rack Mud Trap (closed in 1992)	1962-unknown	The garbage truck wash rack mud trap was located approximately 200 feet southwest of the Building 2980 Hazardous Waste Transfer Facility and approximately 400 feet west of the dumpster wash rack OWS (SWMU 63). The unit consisted of a wash rack and associated mud trap for garbage truck cleaning. Paint brush cleaning also reportedly occurred. Reported possible wastes contained within the unit included soap, paint brush residues from paint brush cleaning, motor oil from trucks and garbage. Solids settled within the trap and the wastewater effluent were discharged to the Stormwater Drainage Ditches (SWMU 5).	2971	Vehicle wash and discharge water, soap, paint brush residues from paint brush cleaning, motor oil from trucks, garbage	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,3,4,8,15
AOI 62	SWMU 60	Sanitary Sewer Lift Station (closed in 1992)	1970-unknown	SWMU 60 is a sanitary sewer lift station associated with the sanitary sewer system at the base. The unit consisted of a concrete pit and lift station for transporting sanitary sewer effluent to the City of Beeville, Texas POTW. The unit received only sanitary sewer discharges after 1980, however, prior to 1980, it was reported that the station received liquid waste from various operations throughout the base, including water effluent from SWMU 63. Hazardous liquid wastes that might have been disposed of through the lift station include oils, Zyglo, photographic fixer, battery acid, paint sludge, methylene chloride, glass beads containing heavy metals and pesticide residues. Non-sewage wastes were discharged to the lift station until around mid- to late-1980s when new waste management procedures were adopted.	2910	Human waste from sanitary sewer lines and water effluent oils, Zyglo, photographic fixer, battery acid, paint sludge, methylene chloride, glass beads containing heavy metals and pesticide residues	No	Some photography agents are known to contain PFAS. However, it is unknown whether the photography agents stored and used at the site contained PFAS and no known release of photography agents have been documented.	2,3,4,8
AOI 63	SWMU 61	Former Sewage Treatment System (closed in 1996)	1940 to 1970	SWMU 61is a former sewage treatment system located near Building 2980. The unit consisted of a grassy area where the former system existed. The unit received sewage and possible liquid waste, both hazardous and non-hazardous, from various operations throughout the base. The unit formerly consisted of a digester and more than one building. Sewage was processed through the digester producing a sludge and liquid effluent. The liquid effluent was discharged to the Stormwater Drainage Ditches (SWMU 5) and sludge residue was dried in the Sludge Beds (SWMU 62).	2910	Human waste from sanitary sewer lines and liquid waste (unknown content)	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,3,4,8

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 64	SWMU 62	Sludge Beds (closed in 1992)	Early 1940s to 1970	SWMU 62 was located outside of the fenced area surrounding SWMU 54-57, approximately 100 feet northeast of the Building 2980 Hazardous Waste Transfer Facility (SWMU 54) and 100 feet north of the Sanitary Sewer Lift Station (SWMU 60). The unit consisted of two unlined sludge beds surrounded by concrete berms used to dry sludge from the digester of the former sewage treatment system it is possible that some hazardous wastes from former practices were discharged to the sanitary sewer system from various operations on base. Sludge was removed from the beds annually and used as scattered fertilizer on base. Since the closing of the Former Sewage Treatment System in 1970, operation of the beds was ceased, the last of the sludge was reportedly removed and the beds were filled with sandy loam.	2980	Wastewater	No	Although some commercial and industrial waste may contain PFAS there are no records or information indicating that products known to contain PFAS have been released at the site.	2,3,4,8,15
AOI 65	SWMU 63	Dumpster Wash Rack OWS (closed in 1996)	1975 to 1986	This unit consisted of a concrete pad used to clean dumpsters. The pad drained to an OWS. The unit was across a gravel road approximately 100 feet south of the Sanitary Sewer Lift Station. The dumpster wash rack with an OWS was decontaminated by Environmental Group, Inc. in 1993. Water effluent from the OWS was directed to the Sanitary Sewer Lift Station (SWMU 60)	2948	Water effluent	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,14,15
AOI 66	SWMU 66	Transformer Storage (closed in 1992)	1991-unknown	This unit consisted of two PCB transformers located in an asphalt parking lot near Building 2009. The unit was approximately 150 feet north of APSA 3005 (SWMU 67), and 100 feet northwest of the JP-5 Loading Facility Sump and UST (SWMU 92). The transformers contained PCBs with a concentration of approximately 100 mm, according to base personnel. The transformers were removed from service the weekend before the VSI conducted on October 28-30, 1991. The transformers were covered with a plastic tarp and were sitting on a wooden pallet on a plastic sheet on the asphalt. The unit occupied an area of approximately 8 feet by 16 feet. There were no visible leaks from the transformers during the VSI.	Near 3005	PCBs	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,15
AOI 67	SWMU 67	Hazardous Waste Facility (closed in 1996)	1987-unknown	This unit consisted of a partially enclosed aboveground structure used for storing 55-gallon drums. The unit was located approximately 20 feet east of the Hangar 2009 Wash rack and OWS (SWMU 69), and adjacent to the Former Waste Storage Near APSA 3005 (SWMU 68). The structure stored wastes generated from Hangar 2009 operations. These wastes included Freon, liquid paint wastes, solid paint wastes, waste alodine solution, and waste glass beads.	3005	Alodine wastes, Freon, liquid paint waste, solid paint wastes, waste glass beads and solvent wastes	No	Operations at the site did not involve materials known to contain PFAS. Therefore, no known releases of products containing PFAS are suspected.	2,8,14,15
AOI 68	SWMU 68	Former Waste Storage (closed in 1992)	1985-1987	This unit consisted of a cinderblock berm and plastic liner containing 550gallon hazardous and nonhazardous waste drums. The unit was located approximately 20 feet east of the Hangar 2009 Wash rack and OWS (SWMU 69), and adjacent to APSA 3005 (SWMU 67). The unit stored wastes generated from Hangar 2009 operations. These wastes were similar to the wastes stored in APSA 3005 (SWMU 67)	Near 3005	Alodine wastes, liquid pain waste, solid paint wastes, waste glass beads, and solvent wastes	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,15
AOI 69	SWMU 69	Wash rack and OWS (closed in 1996)	Mid-1950s-1993	This unit consisted of Hangar 2009 wash rack and associated OWS. This unit was located approximately 20 feet west of APSA 3005 (SWMU 67) and approximately 200 feet south of the PCB Transformer Storage near Building 2009 (SWMU 66). The unit received wastes from jet aircraft cleaning operations. The wastes included wash water, cleaning solutions (presently non-phosphate, non-solvent based; formerly petroleum-based), and oils from aircraft. The wastewater drained through the wash rack to an adjacent OWS. Since 1970 the separated wastewater was discharged to the sanitary sewer lines. Prior to this time, wastewater was discharged to the Stormwater Drainage Ditches (SWMU 5). The separated sludge and oil fraction were reportedly cleaned out and transferred to the FFTA (SWMU 3). The unit was decontaminated by Remedial Construction Services, Inc. in March 1993.	2009	Wash water and, cleaning solutions (presently non-phosphate, non-solvent based; formerly petroleum-based), and oils from aircraft	No	Although some aviation lubrication/hydraulic fluids may contain PFAS, there are no records or information indicating that lubrication/hydraulic fluids stored at the site contained PFAS and no releases of products known to contain PFAS have been documented.	2,3,8,14,15
AOI 70	SWMU 70	Waste Collection Areas (closed in 1996)	Mid-1940s-1992	This unit consisted of four waste collection areas, one each inside four hangars. Each area measured approximately 5 feet by 10 feet or less. The units managed a variety of wastes that included asbestos, waste oil, oily rags, paint waste, Freon, glass beads and scrap metal. The unit was decontaminated by Foresight Environmental, Inc. and Miller Environmental Services, Inc. in October 1992.	1015, 2009, 2015 and 2137	Asbestos, waste oil, oily rags, paint waste, Freon, glass beads and scrap metal	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14,15

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 71	SWMU 71	Hazardous Waste Facility (closed in 1996)	1987-unknown	This unit consisted of a partially enclosed aboveground structure used for storing 55-gallon drums of hazardous and nonhazardous waste generated on-base. The unit was approximately 200 feet southwest of the Hangar 2015 wash rack. The unit was decontaminated by Foresight Environmental, Inc. in October 1992.	3003	JP-5, waste oil and oily absorbent	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14,15
AOI 72	SWMU 72	Former Waste Storage Near APSA 3003 (closed in 1992)	1985-1987	This unit consisted of a cinderblock berm and plastic liner containing 55-gallon hazardous and nonhazardous waste drums. The unit was located approximately 200 feet southwest of the Hangar 2015 Wash rack and OWS (SWMU 73), and adjacent to APSA 3003 (SWMU 71). The unit stored wastes generated from Hangar 2015 operations. These wastes included used oil, oily absorbent, and JP-5 jet fuel.	3003	JP-5, waste oil and oily absorbent	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,15
AOI 73	SWMU 73-1	OWS (closed in 1996)	1950s-unknown	SWMU 73-1 is an OWS located on the northeastern side of Hangar 2015 between SWMU 73-2 and SWMU 81. The unit received oils waste runoff from the hangar. The processed water from the OWS is discharged to a concrete-lined dry well. The OWS and dry well have been connected to the sanitary sewer line since 1989.	2015	Wash water and, cleaning solutions (presently non-phosphate, non-solvent based; formerly petroleum-based)	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,3,4,8,14,15
AOI 74	SWMU 73-2	OWS (closed in 1996)	1960 to 1988	SWMU 73-2 is an OWS located on the northwestern side of Hangar 2015 received cooking grease from the old snack bar in the hangar. The processed water from the OWS was discharged to a concrete lined dry well. The OWS and dry well were connected to the sanitary sewer line since 1989. Prior to 1989 the wastewater was discharged into a nearby ditch.	2015	Waste oils and cooking grease	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	4,8
AOI 75	SWMU 73-3	Wash rack and OWS (closed in 1996)	Mid-1950s-unknown	This unit consisted of an aircraft wash rack and OWS. The unit was located approximately 200 feet northeast of APSA 3003 (SWMU 71), and approximately 300 feet southeast of the Building 2166 Waste Oil UST and OWS (SWMU 38). The unit received waste from the cleaning of jet aircraft. These wastes include oils and aircraft soap. The wash rack was a concrete pad approximately 150 feet by 150 feet and the OWS is of concrete construction and measures 8 feet by 10 feet by 5 feet deep.	2166	Waste oils and aircraft soap	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	4,8
AOI 76	SWMU 74-1	OWS (closed in 1997)	Mid-1950s-1993	This unit consisted of four OWSs on the northeastern side of Hangars 2009 and 2015. The OWSs managed oil waste from runoff within the hangars. The runoff may have also contained small amounts of waste such as solvents or paint. The unit was connected to the sanitary sewer line in 1989. The unit has been removed by Eagle Construction., Inc. in 1993.	2009 and 2015	Waste oils, solvents, paits	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,14,15
AOI 77	SWMU 74-2	OWS (closed in 1997)	Mid-1950s-unknown	This unit was located on the northeast side of Hangar 2009 between SWMU 74-1 and SWMU 81. The unit received oily waste runoff from the hangar. The processed water from the OWS was discharged to a concrete-lined dry well. The OWS and dry well have been connected to the sanitary sewer line since 1989.	2009	Waste oil runoff	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	4,8
AOI 78	SWMU 75	Solvent Tanks (closed in 1996)	1970-1992	See SWMU 8. This unit consisted of two steel ASTs containing paint thinner and alodine solution. The unit was along the southwestern wall inside Hangar 2137. The tanks were used for degreasing small parts and cleaning painting equipment associated with corrosion control activities in the hangar. The unit was decontaminated by Miller Environmental Services, Inc. in August 1992.	2137	Paint thinner and, alodine solution	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14
AOI 79	SWMU 76	APSA 3004 (closed in 1996)	1987-1992	This unit consisted of a partially enclosed aboveground structure that stored 55-gallon drums of hazardous and nonhazardous waste generated on base. Hazardous waste stored in the area included aircraft fuel samples, alodine stripper, paint waste, hydraulic fluid, engine oil and PD-690. Unit was decontaminated by Foresight Environmental, Inc. in October 1992.	3004	Aircraft fuel samples, alodine stripper, paint waste, hydraulic fluid, engine oil, and PD-690	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,14
AOI 80	SWMU 77	Former APSA Waste Storage Near APSA 3004 (closed in 1992)	1985-1987	This unit consisted of a cinderblock berm and plastic liner containing 55-gallon hazardous and nonhazardous waste drums. The unit was located approximately 50 feet southeast of the Hangar 2137 Wash rack and OWS (SWMU 78), and adjacent to APSA 3004 (SWMU 76). The unit stored wastes generated from Hangar 2137 operations. These wastes included waste oil, waste paint, waste alodine solution, oily absorbent, paint stripper waste, and JP-5 jet fuel. In 1992, SWMU 77 was decontaminated.	3004	Waste oil, waste paint, waste alodine solution, oily absorbent, paint stripper waste, and JP-5 jet fuel	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 81	SWMU 78	Wash rack and OWS (closed in 1996)	1970-1993	See SWMU 8. This unit consisted of an aircraft wash rack and a cast iron OWS. The unit was approximately 100 feet west of SWMU 76. Since 1975, the wastewater from the OWS had been discharged to the Hangar 2137 Lift Station wet well from there it was pumped to the sanitary sewer lines. The oil fraction was reportedly skimmed off and transferred to the Hangar 2137 Wash rack UST (SWMU 79). The unit was decontaminated by base personnel in 1993.	2137	Wash water and, cleaning solutions (presently non-phosphate, non-solvent based; formerly petroleum-based)	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,3,4,8,14
AOI 82	SWMU 79	Wash rack UST(closed in 1996)	1970-1993	See SWMU 8. This unit consisted of an UST that received waste oil from the Hangar 2137 wash rack and OWS, approximately 30 feet to the south. Wastes that entered the OWS prior to separation included waste wash water, aircraft cleaning solution (presently non-phosphate, non-solvent based; formerly petroleum based) and oils from aircraft. The separated waste oil was skimmed off, discharged and stored in the UST. The stored oil was pumped out twice per year at most by a fuel contractor and transferred to Building 2980 Hazardous Waste Transfer Facility (SWMU 54). The unit was decontaminated by base personnel in 1993.	2137	Wash water, cleaning solutions (presently non-phosphate, non-solvent based; formerly petroleum-based), and waste oil from aircrafts	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,3,8,14
AOI 83	SWMU 80	Lift Station (closed in 1996)	1975-1993	See SWMU 8. This unit consisted of a wet well lift station that pumped wastewater from the Hangar 2137 OWS. The unit was approximately 40 feet northeast of the Hangar 2137 wash rack and OWS. The unit received wastewater from cleaning jet aircraft on the wash rack. The oil was skimmed off into the associated Hangar 2137 Wash rack UST (SWMU 79), and the water fraction was discharged to the wet well. Once the water reached a certain level, an automatically activated pump discharged the water in the wet well to the sanitary sewer lines (SWMU 6). Prior to the unit's construction in 1975, the water from the OWS went to the stormwater drainage ditches (SWMU 5). The unit was decontaminated by base personnel in 1993.	2137	Wash water from cleaning jet aircraft	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,3,8,14
AOI 84	SWMU 81	OWS (closed in 1997)	1975-1993	This unit was an OWS that served the AIMD ordnance shop in Building 2133. The unit was approximately 200 feet northwest of OWSs at Hangars 2009 and 2015. This unit received oily waste from operations in Building 2133. Hazardous and non-hazardous wastes may have been dumped down the floor drains prior to the mid-1980s. Hazardous components associated with the AIMD may have included 1,1,1-trichloroethane and cadmium-containing glass beads. Water from the OWS was discharged to the sanitary sewer lines (SWMU 6). Prior to the unit's construction in 1975, the water from the OWS went to the stormwater drainage ditches (SWMU 5). The unit was used for the storage of paints, solvents and Freon and was removed by Eagle Construction, Inc. in 1993.	2133	Waste oil, paints, solvents, 1,1,1-trichloroethane and cadmium-containing glass beads and, Freon	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,3,4,8,14,15
AOI 85	SWMU 82	AVGAS Piping and USTs (closed in 1996)	Mid-1940s to Mid-1950s	This unit consisted of eight USTs used for storage of aviation fuel known as AVGAS and an underground piping which serviced these eight AVGAS USTs. The unit was located approximately 200 feet northeast of the Building 2137 Former Waste Oil UST (SWMU 18), and approximately 300 feet southwest of the Alleged FFTA Near Building 1034 (SWMU 83). The unit stored AVGAS for use in aircraft from the mid-1940s until the USTs were taken out of service in the mid-1950s. Six-inch diameter underground piping carried the fuel to the USTs. A pump house was present at the unit that pumped AVGAS from the USTs through 6-inch underground lines about 2,000 feet to Hangar 1015. All eight USTs were ten feet in diameter, but three different sizes. Five USTs held 18,800 gallons each, two USTs held 23,500 gallons each, and one UST held 17,600 gallons. The steel USTs were set approximately 5 feet below-grade and are surrounded by concrete. This concrete was approximately 2 feet thick at the bottom of the USTs. Rectangular concrete manholes, which have since been filled in, lead down to the top of each UST. USTs were removed in 1993 and the excavation area was clean per Texas Natural Resource Conservation Commission (TNRCC) guidelines.	NA	TPH and total lead	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,15
AOI 86	SWMU 84	Former Waste Storage at Airfield (Flambeaux Site) (closed in 1992)	Mid-1960s	This unit consisted of an alleged 55-gallon drum storage area of unknown size located between two runways at the airfield. The unit was located approximately 2,000 feet east of the Northwest Rubble Disposal Area (SWMU 2), and approximately 3,000 feet northwest of the Engine Test Facility (SWMU 64). The unit stored waste fuels and oils from various base operations for a few years in the mid-1960s for use in smudge pots (also called "flambeaus") that were placed alongside the runways at night.	NA	Waste fuels, waste oils and PD-680 solvent	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,15

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 87	SWMU 85	Lube Oil UST's (closed in 1992)- Landplane Hangar 1015	1943 - 1950s	Hangar 1015 was constructed in 1943. The Hangar was located on concrete pavement next to the runways. The building included a large barrel vault that extends southwest to northeast. The unit included is a small outbuilding, 1015A, which was essentially an air conditioning filter storage area. Based on the Environmental Baseline Survey for Lease (July 1993) the following materials and substances were reportedly stored at the Hangar when the station was in operation: Freon, chlorinated solvents, paint thinner, paint remover, epoxy and lacquer paints, waste paint and waste paint filters, sulfuric acid, oils (waste, JP-4, constant speed drive [CSD], and turbine and engine oil). This unit also consisted of two steel underground storage tanks located on the southeast side of Building 1015. One UST was located approximately 5 feet off the southeastern corner and one UST was located approximately 5 feet off the southwestern corner of Building 1015. The USTs were used to store lube oil for aircraft usage. The USTs were in use in the 1940s and taken out of service in the 1950s. Steel product lines ran underground from the USTs for about 20 feet to a flush-mounted connection where aircraft would taxi to be lubricated. Leak testing has never been performed on either UST or product lines, and the USTs have no cathodic protection. The concrete pads above each UST were cracked, and there were no visible stains noted around the vent or fill pipes during the VSI conducted on October 28-30, 1991. Building 1015A was essentially an air conditioning filter storage area. No hazardous material storage, stains or signs of hazardous materials were present during the inspection conducted for the baseline survey.	1015 and 1015A	Freon, chlorinated solvents, paint thinner, paint remover, epoxy and lacquer paints, waste paint and waste paint filters, sulfuric acid and, oils (waste, JP-4, CSD and, turbine and engine oil)	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8,15
AOI 88	SWMU 86	Vacuum Truck (closed in 1996)	Mid-1940s-unknown	A total of 13 grease traps were located at mess halls and restaurants on-station to collect galley grease. The raps were pumped-out by the PW Department Transportation Operations Department using a 500-gallon capacity vacuum truck. A total of approximately 2,000 gallons of grease and water were collected from the grease traps per month. Until 1977, the liquid removed from the grease traps was emptied into the station's landfills (IR Sites 1 and 2). Since 1977, the grease and water were pumped into the sanitary sewer system at the lift station. SWMU 86 was a vacuum truck that was parked next to Hangar 1015. The truck was transferred to Corpus Christi.	NA	Used grease	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,7,8,15
AOI 89	SWMU 87	Government Filling Station Sump/UST (transferred to TDCJ)	1975-unknown	This unit was located near the JP-5 Recycle Facility (SWMU 88). The unit consisted of an emergency sump and UST, designed to receive gasoline and diesel fuel spills from the filling station. A fuel pump was located on an open concrete area sloped to direct runoff to the sump. Consequently, the sump received both water from precipitation and spilled fuel. The concrete UST measured approximately 4 feet in diameter and 8 feet in depth. The filling station, UST and sump were constructed in 1975.	NA	Runoff and spilled gasoline and diesel fuel	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8 ,9, 13
AOI 90	SWMU 88	JP-5 Recycling Facility (transferred to TDCJ)	1989-unknown	This unit consisted of an AST and jet fuel recycling process unit. This unit was located approximately 50 feet southwest of the Government Filling Station Sump and UST (SWMU 87) and approximately 200 feet northwest of APSA 3004 (SWMU 76). The unit recycled JP-5 jet fuel from the various operations on-base. The waste jet fuel was pumped out of the various 55-gallon drums located at the APSAs on-base and brought to the waste fuel to the recycling facility in a tanker truck. The drainage from the concrete pad led to the Government Filling Station Sump and UST (SWMU 87).	NA	JP-5	No	Operations at the site did not involve materials known to contain PFAS. Therefore, no known releases of products containing PFAS are suspected.	2,8, 9, 13
AOI 91	SWMU 89	Former Bowser (transferred to TDCJ)	1974-1989	This unit consisted of a steel tank mounted on wheels located at Building 1016, the Auto Hobby Shop. Prior to its conversion to an Auto Hobby Shop, building 1016 used to be a bakery. The unit was located approximately 60 feet southwest of the Building 1016 Waste Storage Area (SWMU 90), and approximately 60 feet south of the Building 1016 Used Battery and Oily Absorbent Storage Area (SWMU 91). The area where the bowser was stored was surrounded by a locked fence. The unit received waste oil and waste coolant from activities at Building 1016. Base personnel were allowed to wash personal vehicles at this unit discharging wastewater onto a covered concrete pad. The pad was sloped and bermed to drain to the OWS. The OWS discharged into the Sanitary Sewer Lines (SWMU 6).	1016	Potential oils and, grease	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,7,8

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 92	SWMU 90	Waste Storage Area (transferred to TDCJ)	1989-unknown	This unit was located approximately 60 feet east of the Building 1016 Used Battery and Oil Absorbent Storage Area. Wastes oils and coolants from automotive repair were spilled over the years staining the asphalt and soil in this area. This was an area where base personnel worked on their own vehicles at the shop and reportedly generated waste oil and engine coolant. The waste was deposited in 55-gallon drums as it was generated and then sent to the Building 2980 Hazardous Waste Transfer Facility (SWMU 54). Prior to 1989 the waste liquids were sent to the Building 1016 Former Bowser (SWMU 89).	1016	Waste oils and coolant	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,15
AOI 93	SWMU 91	Used Battery and Oily Absorbent Storage Area (transferred to TDCJ)	1974-unknown	See SWMU 89. This unit consisted of a wooden pallet used for storing used automotive batteries and a 55-gallon drum for storage of oily absorbent and used oil filters at Building 1016. The unit was located approximately 60 feet north of the Building 1016 Former Bowser (SWMU 89), and approximately 60 feet west of the Building 1016 Waste Storage Area (SWMU 90). The unit received used automotive batteries, oily absorbent, and used oil filters from activities conducted in Building 1016, the Auto Hobby Shop.	1016	Battery acid (nickel/cadmium and lead/acid) and, waste oils	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8
AOI 94	SWMU 92	JP-5 Loading Facility Sump/UST	1975-unknown	This unit was located approximately 100 feet southeast of the PCB Transformer Storage Area near Building 2009, and approximately 200 feet east of APSA 3005. The unit consisted of an emergency sum and UST designed to receive JP-5 jet fuel spills from the loading facility. A drain tank also existed on the western side of the fuel pump island. The concrete sump measured approximately 30 feet by 8 inches by 6 inches deep. The concrete UST measured approximately 6 feet by 6 feet by 8 feet deep with a reported capacity of 2500 gallons. The concrete pad where vehicles were refueled was approximately 30 feet by 60 feet.	1097	Jet fuel (JP-5)	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,15
AOI 95	SWMU 93 (93-1 and 93-2)	Hydraulic Fluid Collection System (2 USTs) (closed in 1992)	1970-unknown	This unit was located on the northwestern side of Building 1031. The unit consisted of an UST, associated piping, and a sump. Building 1031 housed three flight simulators for pilot training that used hydraulic fluid for movement of the simulator canopy. Shallow sumps beneath the simulators collected any leakage of hydraulic fluid. The sumps channeled the waste hydraulic fluid to separate USTs, one on the northwestern side (93-1) of Building 1031, and the other on the northeastern side (93-2). The USTs, which were constructed of steel, measured approximately 4 feet by 6 feet by 8 feet in depth.	1031	Hydraulic fluid	No	Although some aviation lubrication/hydraulic fluids may contain PFAS, there are no records or information indicating that lubrication/hydraulic fluids stored at the site contained PFAS and no releases of products known to contain PFAS have been documented.	2,4,8,15
AOI 96	SWMU 94	Former Photo Lab (closed in 1992)	1955-1990	This unit consisted of a photo lab in Building 1031 for the development of mainly black and white photos from training flights. The unit was located approximately 200 feet southeast of the Building 1031 Hydraulic Fluid Collection System (SWMU 93), and approximately 200 feet northwest of APSA 3006 (SWMU 39). The photo lab generated various photographic wastes from the developing process. These wastes may have included mercury, lead, selenium, and silver. The wastes were disposed of through the Sanitary Sewer Lines (SWMU 6). USTs on the site were removed and closed. Several containers (AST and drums) containing fuel oil, hydraulic oil, pump oil, Freon 113, or an alkaline cleaning compound and compressed cylinder were observed during a Visual Site Inspection. Paints and solvents were reportedly associated with Building 1031 and the utility room floor was stained by oil. Asbestos was confirmed in the building's pipe insulation and floor tiles (1992 Cape Environmental Management survey). Transformers behind building contained less than 50 ppm PCBs.	1031	Photographic wastes (mercury, lead, selenium, and silver)	No	Some photography agents are known to contain PFAS. However, it is unknown whether the photography agents stored and used at the site contained PFAS and no known release of photography agents have been documented.	2,8,15
AOI 97	SWMU 95	Scrap Metal Storage Inside (transferred to TDCJ)	1985-unknown	This unit consisted of an area inside Building 1002 for storage of precious scrap metals and other salvageable material. The unit was located approximately 400 feet east of the JP-5 loading facility sump and UST and approximately 400 feet north of the Building 1031 Hydraulic Fluid Collection System (SWMU 93). The unit managed scrap and salvageable materials from a variety of base operations. Wastes managed included scrap precious metals, used batteries, scrap rubber and scrap nylon. According to base personnel, scrap and salvageable materials were sent to the unit as they were generated at the various base facilities. Prior to 1985, the scrap metals were sent to the Northwest Rubble Disposal Area (SWMU 2). After 1985, the metals were sent to auction. According to Initial Assessment Study, potentially photographic film and fixer solution, compressor blades containing precious metals, dental amalgams and x-ray film were stored in the building.	1002	Scrap metal	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,7,8,9,13

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 98	SWMU 96	Scrap Metal Storage Outside (transferred to TDCJ)	1985-unknown	This unit consisted of a fenced area outside of Building 1002 for storage of scrap metals and other salvageable materials. The unit was located approximately 400 feet east of the JP-5 Loading Facility Sump and UST, and approximately 400 feet north of the Building 1031 Hydraulic Fluid Collection System (SWMU 93). This unit managed scrap and salvageable materials from a variety of base operations. Wastes managed included scrap metals, used batteries, drums of cooking grease, used tires, old lawn mowers, used refrigerators, empty compressed gas cylinders, and wooden pallets. This unit was a bin where scrap metal was accumulated for recycling. According to base personnel, scrap and salvageable materials are sent to the unit as they are generated at the various base facilities. Prior to 1985, the scrap metals were sent to the Northwest Rubble Disposal Area (SWMU 2). After 1985, the metals were sent to auction. The used tires were sent to the recycler.	1002	Scrap metal, used batteries, drums of cooking grease, used tires, old lawn mowers, used refrigerators, empty compressed gas cylinders, and wooden pallets	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8, 9,13
AOI 99	SWMU 97	Auto Wash Racks at BOQ and BEQ (transferred to TDCJ)	1971-unknown	The unit consisted of two auto wash racks, one located at the BEQ and one at the BOQ. The wash rack at the BEQ was located approximately 600 feet northwest of the Building 1016 Used Battery and Oily Absorbent Storage Area (SWMU 91) and approximately 1,000 feet southwest of the BOQ wash rack. The BOQ wash rack was located approximately 1,000 feet northwest of the BEQ wash rack and approximately 1400 feet north of the Building 1016 used Battery and Oily Absorbent Storage Area (SWMU 91). This unit possibly received waste oil and coolant from automobiles that were cleaned on the wash racks. The BEQ wash rack drains to the northeast into a storm sewer that led to the Stormwater Drainage Ditches (SWMU 5). The BOQ wash rack had a drain in its center that also led to the drainage ditches.	NA	Waste oil and coolant	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,8, 9,13
AOI 100	SWMU 98	Pest Control Shop Interior Sumps (transferred to TDCJ)	1980-unknown	The Pest Control Shop was located in Building 2962 since 1980. Previously it was located in Building 1037. The shop had the responsibility of pest control indoors and outdoors throughout the station. Procedures for mixing and applying pesticides have remained essentially the same throughout the history of the shop. Pesticides were completed used-up to prevent accumulation of wastes. Prior to the mid-1970s, empty pesticide containers were placed in a dumpster for disposal. The containers ultimately would have been placed in one of the landfills (IR Sites 1 and 2) or taken off-station. These containers would have retained small quantities of pesticides. Since the mid-1970s, the empty containers have been triple rinsed, then placed in a dumpster for disposal. The rinse water was used as make-up water to dilute concentrated pesticides. The rinsed containers ultimately were placed in a landfill (IR Sites 1 and 2) or hauled off-station for disposal.	2962	Pesticides	No	While the DON recognizes that some pesticides contain PFAS, the DON has no information or documentation verifying the use, storage, or release of PFAS materials at this site.	2,7,8
AOI 101	SWMU 99	Pest Control Shop Exterior Sump (transferred to TDCJ)	1980-unknown	See SWMU 98. This unit was located outside Building 2962, approximately 100 feet west of the Building 1046 Former Waste Oil UST. The unit consisted of a sump designed to receive any pesticide spills that may occur outside the Building 2962 Pest Control Shop. The sump existed beneath a roofed area, in the center of a concrete pad that sloped to direct drainage to the sump. The concrete sump measured approximately 2 feet by 2 feet by 4 feet deep. A gate valve associated with the sump was kept closed but could be opened to direct accumulated rainwater to the Sanitary Sewer Lines (SWMU 6). In the case of a spill, the waste would enter a sump and would be cleaned out and shipped to Building 2980 Hazardous Waste Transfer Facility (SWMU 54).	2962	Waste oil, pesticides	No	While the DON recognizes that some pesticides contain PFAS, the DON has no information or documentation verifying the use, storage, or release of PFAS materials at this site.	2,3,4,8
AOI 102	SWMU 100	Former Pest Control Shop (transferred to TDCJ)	1940s to 1980s	The unit was an area of discharge about 1 square yard located outside Building 1093 Former Pest Control Shop, approximately 200 feet west of the JP-5 Recycle Facility (SWMU 88), and approximately 200 feet northeast of the PW Sawdust Collection Area (SWMU 45). The unit consisted of a rectangular bermed area inside Building 1093 that was used for storing and mixing of pesticides. The bermed area was located against an outside wall with a small hole, approximately 2 inches in diameter at its base. The hole led to the soils outside the building.	1093	Pesticides	No	While the DON recognizes that some pesticides contain PFAS, the DON has no information or documentation verifying the use, storage, or release of PFAS materials at this site.	2,3,4,8,12

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 103	SWMU 101	CB Sawdust Collection System (transferred to TDCJ)	1975-unknown	This unit consisted of a steel funnel and 55-gallon drum for collecting sawdust from the Construction Battalion (CB), Carpentry Shop. The unit was located approximately 400 feet northeast of the Building 1031 Former Photo Lab (SWMU 94), and approximately 200 feet west of the PW Sawdust Collection Area (SWMU 45). The unit received sawdust from carpentry activities in the CB's Carpentry Shop. The sawdust was vacuumed off the various wood-working machinery and sent through overhead conduits to the funnel that was located immediately outside of the Shop on the southeast side of Building 1037. The funnel filled the 55-gallon drum below it approximately every 3 months and was then sent to the Beeville Municipal Landfill, or was landfilled on base at the Northwest Rubble Disposal Area (SWMU 2)	1037	Sawdust	No	Operations at the site did not involve materials known to contain PFAS. Therefore, no known releases of products containing PFAS are suspected.	2,8
AOI 104	SWMU 102	JP-5 Unloading Facility Sump/UST	1975-unknown	This unit was located at the northwestern corner of the base adjacent to Highway 202. The site consisted of an emergency sump and UST at the JP-5 unloading facility. The unit was approximately 2,000 feet north of Building 2980. The unit was designed to handle JP-5 jet fuel spilled from the unloading facility. The concrete sump measured approximately 30 feet by 8 inches by 6 inches deep. The concrete UST measured approximately 4 feet diameter by 8 feet deep. The unit was decontaminated and inspected by Environmental Group, Inc. in 1993.	NA	Jet fuel (JP-5)	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4,8,15
AOI 105	SWMU 103	Transformer Storage Yard Near Stables (transferred to TDCJ)	Unknown	Located just north of the horse stable. The site is surrounded by a chain-link barbed wire fence that limits access. Inside the fence the site is covered by a layer of crushed rock, stone and natural materials that is approximately 0.5 foot thick. Typically, transformers were stored on wood pallets or on the gravel surface during transfer prior to disposal.	NA	PCBs	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4
AOI 106	SWMU 104	Small Arms Range (transferred to TDCJ)	Unknown	SWMU 104 is located near Building 1063. Soil berms were used for target support and projectile backstop contained lead and copper jacketed and steel jacketed metal projectile points.	1063	Lead and, copper	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4
AOI 107	SWMU 105	Auto Hobby Shop OWS (transferred to TDCJ)	1950s-unknown	SWMU 105 was the Building 1016 OWS. Base personnel were allowed to wash personal vehicles at the unit discharging wastewater onto a covered concrete pad. The pad drained into the OWS.	1016	Wash water	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4
AOI 108	SWMU 106	Auto Hobby Shop Grease Trap (transferred to TDCJ)	1950s-unknown	See SWMU 89. SWMU 106 was used originally by a bakery prior to becoming the auto hobby shop.	1016	Waste oils	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2
AOI 109	SWMU 107	Oil Spill Site (transferred to TDCJ)	Unknown	Two 55-gallon drums of oil were found and removed, and 20 yards of soil were also removed.	2008	Waste oils	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2
AOI 110	SWMU 112	Old Turnup Site (closed in 1996)	Unknown	Located on the northeast of the aircraft taxi ramp. This area was used by aircraft to conduct static engine tests prior to flight.	3003	Jet exhaust	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	2,4
AOI 111	SWMU 113	Grease Trap	Unknown	Located on the northwestern corner of Building 1046. The exact location of the grease trap was determined during the field investigation from information provided by base personnel. Building 1046 was used primarily for automotive maintenance. Wastes from this building may have included waste oils, degreasers and metals associated with batteries.	1046	Waste oils, degreasers and metals associated with batteries	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	4

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 112	NA	Small Arms and Pyrotechnics Magazine	Unknown	Asbestos was found in the building and abated.	Building 1036	Asbestos	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 113	NA	Fuel Contractor's office	Unknown	The building is a small structure northeast of the former location of three large ASTs. Asbestos was confirmed (1992 Cape Environmental Management survey).	Building 1059A	Asbestos	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 114	NA	Small-Arms Range/SWMU 104	Unknown	The site is used as a small arms range.	Building 1063	Metals	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 115	NA	PW Shop/Cement Storage	Unknown	The building stored bentonite, ceramic adhesive, sealant, primer paint, and lubricating oil. Asbestos was confirmed and abated (1992 Cape Environmental Management survey).	Building 1094	Bentonite, ceramic adhesive, sealant, primer paint, and lubricating oil, asbestos	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 116	NA	Asphalt storage tank	Unknown	The site contained a 10,000-gallon metal AST for road tar.	Building 1095	Road tar	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 117	NA	Jet Fuel Tank	Unknown	The site contained a 567,000-gallon jet fuel UST that was removed.	Building 1097A	Jet fuel	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 118	NA	PW Maintenance Storage/Special Services	Unknown	The building stored electrical components, such as wire connectors and wire pulling lubricant. Asbestos was identified and remediated.	Building 2013	Lubricant, asbestos	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 119	NA	Crash Crew Shelter	Unknown	Asbestos was confirmed at the site(1992 Cape Environmental Management survey) and lead-based paint may also be present.	Building 2014	Asbestos, lead-based paint	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 120	NA	Aviation Gas Tank	Unknown	The site contained a 25,000-gallon UST that was removed.	Building 2017	Aviation gas	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 121	NA	Diesel tank	Unknown	The site contained a 25,000-gallon UST that was removed.	Building 2018	Diesel	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 122	NA	Aviation Fuel Tank	Unknown	The site contained a 567,000-gallon UST that was removed.	Building 2020	Aviation fuel	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 123	NA	Operations Building	Unknown	Based on interviews with base personnel, building 2051 stored various hazardous materials and substances including paints, paint thinner, solvents, acids, oils and Freon. The UST on the southeastern side of Building 2051 was removed.	Building 2051	Paints, paint thinner, solvents, acids, oils and Freon	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 124	NA	Master Television Antenna	Unknown	No information available.	Building 2072	Unknown	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 125	NA	Loading Ramp	Unknown	No information available.	Building 2089	Unknown	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

PFAS AOI	Site ID	Site Name and Status	Use Date	Location, Description, and Site Background	Associated Buildings	Type of Material Stored/Used/Spilled/ Disposed of	Potential for PFAS	Conclusions	Source
AOI 126	NA	Ready Magazine	Unknown	No information available.	Building 2090	Unknown	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 127	NA	Training Building/General Storage Shed	Unknown	The site was a training Building and used for general storage.	Building 2110	Unknown	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 128	NA	Lox Facility	Unknown	Paint peelings observed on the interior floor.	Building 2131	Paint peelings	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 129	NA	Crash Crew Shelter	Unknown	Asbestos was confirmed.	Building 2014	Asbestos	No	No materials that contain PFAS are documented to have been used, stored, released, or disposed of at this site.	15
AOI 130	NA	NA	March 2009	Brush fire encompassing 640 acres area north of Runway 13L.	NA	Foam	No	Based on a news article in the Beeville Bee a brush fire encompassed 640 acres north of Runway 13L which indicated the dispatch of “foam trucks” in response. However, based on personal interview with The former firefighter, the fire was a Class A fire which did not require the use of AFFF. Class A fires are extinguished by penetrating the burning material with water or other non-PFAS containing agents. At this time, documentation describing the fire response is not available. Therefore, no known releases of products containing PFAS are suspected.	1, 17
AOI 131	NA	T-2 aircraft crash	July 14, 1989	Newspaper article for the crash of a T-2 aircraft between the two parallel runways at Chase Field.	NA	Unknown	No	No mention of an aircraft fire was in the news article. The nature of the crash and the management of the crash is unknown.	16

Acronyms:
AFFF = aqueous film-forming foam; AIMD = aircraft intermediate maintenance department; APSA = accumulation point staging area; AST = aboveground storage tank; AVGAS = aviation gasoline; BEQ = Bachelor Enlisted Quarters; BOQ = Bachelor Officers Quarters; CB = construction battalion; CSD = constant speed driving; DPDO = Defense Property Disposal Office; FFTA = fire fighter training area; GSE = ground support equipment; IR = installation restoration; NA = not applicable; NAS = Naval Air Station; NDI = nondestructive inspection; OWS = oil-water separator; PCB = Polychlorinated biphenyl; PFAS = Per- and polyfluoroalkyl substances; POTW = Publicly owned treatment works; SWMU = solid waste management unit; TDCJ = Texas department of criminal justice; TNRCC = Texas natural resource conservation commission; UST = underground storage tank; VSI = visual site inspection;

Sources:

1. Beeville Bee, 2009. Fire Consumes 640 Acres Near Chase Field Industrial Complex and Airport. March.
2. DON, 1995. Fact Sheet Chase Closure Report, NAS Chase Field, Texas. January.
3. Ensafe, 1992. Facility Assessment Work Plan. April.
4. Ensafe, 1993a. Final Facility Assessment Report. March.
5. Ensafe, 1993b. Final Site Investigation Report, Naval Air Station Chase Field, Beeville, Texas. October.
6. Ensafe, 1997. Final Closure Report for IR Site 1and 2. November.
7. Envirodyne, 1985. Initial Assessment Study, Naval Air Station, Chase Field, Beeville, Texas. September.
8. EPA, 1992. RCRA Facility Assessment Report with Transmittal. January.
9. NAVFAC, 1992. Environmental Baseline Survey for Transfer Chase Park Housing with Transmittal NAS Chase Field TX. November.

Table 5-2: Areas of Interest Recommended for No Further Action – Former Naval Air Station Chase Field (continued)

10. MK, 1994. Work Plan Decontamination of 12 Solid Waste Management Units. May.
11. MMEC Group 2019. Final Drinking Water Survey Report, Naval Air Station Chase Field, Beeville, Texas. March.
12. NAS Dallas Housing, 1994. Facility Investigation Summary Report Solid Waste Management Unit 100. November.
13. NAVFAC, 1995. Solid Waste Management Unit Documents. September.
14. NAVFAC, 1997. Final Environmental Baseline Survey for Transfer to Bee County Redevelopment Authority. April.
15. NAVFAC, 1998. Final Closure Report for SWMU 49, NAS Chase Field, Beeville, Texas. January.
16. UPI, 1989. Crash kills second Navy pilot in week- UPI archives. October 4.
17. User Questionnaires are located in Appendix A.

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Table 5-3: Migration Pathways and Potential Receptors for AOIs Where Further Investigations May Be Warranted

PFAS AOI	Site Name, Description, and Status	Current Site Use and Surface Conditions	Groundwater Basin/ Beneficial Use[1]/ Current Use	Distance to Downgradient Water Supply Well	Hydrologic Basin/ Beneficial Use[1]	Potentially Affected Media	Potential Current Receptors	Potential Future Receptors
IR Site 3	IR Site 3 - Former Firefighter Training Area	Vegetation, bare ground	Gulf Coast Aquifer/ municipal, industrial and irrigation	1,500 feet	San Antonio-Nueces Water Group (Spring Creek-Arkansas River subbasin)/livestock and local supply, irrigation, a lake/reservoir system, mining and manufacturing	Soil, groundwater	Commercial/industrial worker (on-base)	Commercial/ Industrial/Construction Worker, Hypothetical Resident
IR Site 4	IR Site 4 - Former Firefighter Training Area	Vegetation, bare ground	Gulf Coast Aquifer/ municipal, industrial and irrigation	NA	San Antonio-Nueces Water Group (Spring Creek-Arkansas River subbasin)/livestock and local supply, irrigation, a lake/reservoir system, mining and manufacturing	Soil, groundwater	Commercial/industrial worker (on-base)	Commercial/ Industrial/Construction Worker, Hypothetical Resident
IR Site 5	IR Site 5 - Heard Ditch at Outfall to Adjacent Property	Vegetation, bare ground	Gulf Coast Aquifer/ municipal, industrial and irrigation	NA	San Antonio-Nueces Water Group (Spring Creek-Arkansas River subbasin)/livestock and local supply, irrigation, a lake/reservoir system, mining and manufacturing	Soil, surface water, groundwater	Commercial/industrial worker (on-base)	Commercial/ Industrial/Construction Worker, Hypothetical Resident
AOI 1	SWMU 83 - Alleged FFTA	Vegetation, bare ground	Gulf Coast Aquifer/ municipal, industrial and irrigation	3,600 feet	San Antonio-Nueces Water Group (Spring Creek-Arkansas River subbasin)/livestock and local supply, irrigation, a lake/reservoir system, mining and manufacturing	Soil, groundwater	Commercial/industrial worker (on-base)	Commercial/ Industrial/Construction Worker, Hypothetical Resident
AOI 2	Runway 13L	Flight line, paved	Gulf Coast Aquifer/ municipal, industrial and irrigation	2,600 feet	San Antonio-Nueces Water Group (Spring Creek-Arkansas River subbasin)/livestock and local supply, irrigation, a lake/reservoir system, mining and manufacturing	Soil, groundwater	Commercial/industrial worker (on-base)	Commercial/ Industrial/Construction Worker, Hypothetical Resident
AOI 3	Runway 17	Flight line, paved	Gulf Coast Aquifer/ municipal, industrial and irrigation	NA	San Antonio-Nueces Water Group (Spring Creek-Arkansas River subbasin)/livestock and local supply, irrigation, a lake/reservoir system, mining and manufacturing	Soil, groundwater	Commercial/industrial worker (on-base)	Commercial/ Industrial/Construction Worker, Hypothetical Resident
AOI 4	Compass Rose – Alleged FFTA	Paved	Gulf Coast Aquifer/ municipal, industrial and irrigation	2,450 feet	San Antonio-Nueces Water Group (Spring Creek-Arkansas River subbasin)/livestock and local supply, irrigation, a lake/reservoir system, mining and manufacturing	Soil, groundwater	Commercial/industrial worker (on-base)	Commercial/ Industrial/Construction Worker, Hypothetical Resident
AOI 5	North branch of SWMU 5	Vegetation, bare ground	Gulf Coast Aquifer/ municipal, industrial and irrigation	<50 feet	San Antonio-Nueces Water Group (Spring Creek-Arkansas River subbasin)/livestock and local supply, irrigation, a lake/reservoir system, mining and manufacturing	Soil, surface water, groundwater	Commercial/industrial worker (on-base)	Commercial/ Industrial/Construction Worker, Hypothetical Resident
AOI 6	Buildings 2142 and 2101 – Fire Department Storage	Building and paved	Gulf Coast Aquifer/ municipal, industrial and irrigation	3,500 feet	San Antonio-Nueces Water Group (Spring Creek-Arkansas River subbasin)/livestock and local supply, irrigation, a lake/reservoir system, mining and manufacturing	Soil, groundwater	Commercial/industrial worker (on-base)	Commercial/ Industrial/Construction Worker, Hypothetical Resident

Notes:
1. Bee Groundwater Conservation District Groundwater Management Plan, October 4, 2018

Acronyms:
AOI = Area of Interest; FFTA = firefighting training area; IR = Installation Restoration; NA = not applicable; PFAS = per- and polyfluoroalkyl substances; SWMU = solid waste management unit

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6.0 References

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Figures

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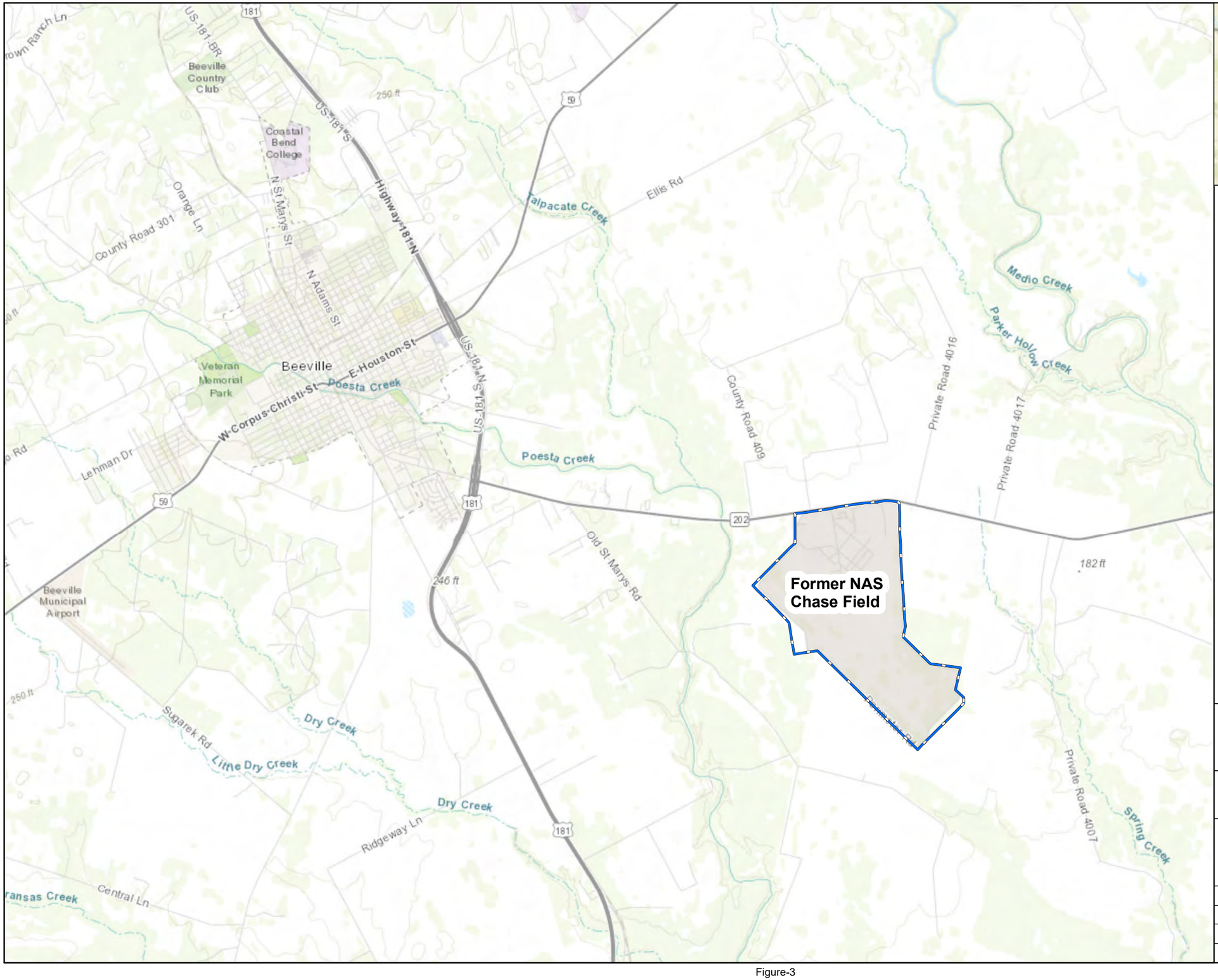

LEGEND

Former NAS Chase Field Boundary

Notes:
NAS = Naval Air Station

Basemap Source/Aerial Photo: ESRI ArcGIS online service 2019

0 0.5 1 2
Miles
1 Inch = 1 Miles

Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances Sites
Preliminary Assessment
Former Naval Air Station Chase Field, Beeville, Texas

Site and Vicinity Map

PROJECT NO.:	5026-19-4022
DATE:	March 2020
DRAWN BY:	KOB
CHECKED BY:	KS

NAVFAC

FIGURE 1

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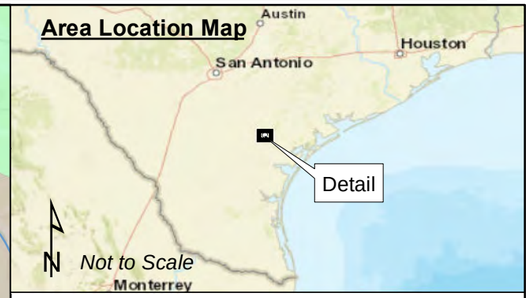
Former NAS Chase Field

Coastal Bend College
N St Mary's St
Highway 181 N
Talpacate Creek
Ellis Rd
Talpacate Creek
N Adams St
Beeville
E Houston St
Poesta Creek
Upper Poesta Creek
US 181 N
US 181
Poesta Creek
181
202
246 ft
Old St Marys Rd
Dry Creek
Dry Creek
Ridgeway Ln
Dry Creek
181
Lower Poesta Creek
Lower Aransas Creek
Upper Aransas Creek
Parker Hollow Creek
Medio Creek
Boggy Creek-Medio Creek
Middle Blanco Creek
Murphy Creek
Neddy Creek
Private Road 4016
Parker Hollow Creek
County Road 409
Private Road 4017
South Blanconia Oil Field-Medio Creek
202
182 ft
Private Road 4007
Spring Creek
Spring Creek-Aransas River
Wicker Rd
Corrigan Hole-Aransas River
Boggy Creek-Aransas River
Corrigan Hole-Aransas River

Area Location Map



LEGEND

- USA Detailed Streams
- Former NAS Chase Field Boundary

Hydrologic Unit: Subwatershed (HUC 12s)

- 121004060105, Boggy Creek-Medio Creek
- 121004060106, Parker Hollow Creek
- 121004060107, South Blanconia Oil Field-Medio Creek
- 121004060108, Neddy Creek
- 121004060204, Middle Blanco Creek
- 121004060206, Murphy Creek
- 121004070101, Upper Poesta Creek
- 121004070102, Talpacate Creek
- 121004070103, Lower Poesta Creek
- 121004070104, Upper Aransas Creek
- 121004070106, Lower Aransas Creek
- 121004070204, Spring Creek-Aransas River
- 121004070205, Corrigan Hole-Aransas River
- 121004070206, Boggy Creek-Aransas River

Notes:
*SOURCE: USGS, 1995 and NAVFAC SW, 1992.
NAS = Naval Air Station

Basemap Source/Aerial Photo: ESRI ArcGIS online service 2019

N
0 0.5 1 2
Miles
1 Inch = 1 Miles

Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances Sites
Preliminary Assessment
Former Naval Air Station Chase Field, Beeville, Texas

Hydrological Basins

PROJECT NO.:	5026-19-4022
DATE:	March 2020
DRAWN BY:	KOB
CHECKED BY:	KS

NAVFAC

FIGURE 2

Date: 3/3/2020 Path: P:\Projects-South\CADGIS\AUTOCAD\5026-19\4022_PFAS_PA_Chase\GIS\Figs_Chase_PFAS_PA_Feb2020\Fig02_Chase_PFAS_PA_Hydro.mxd

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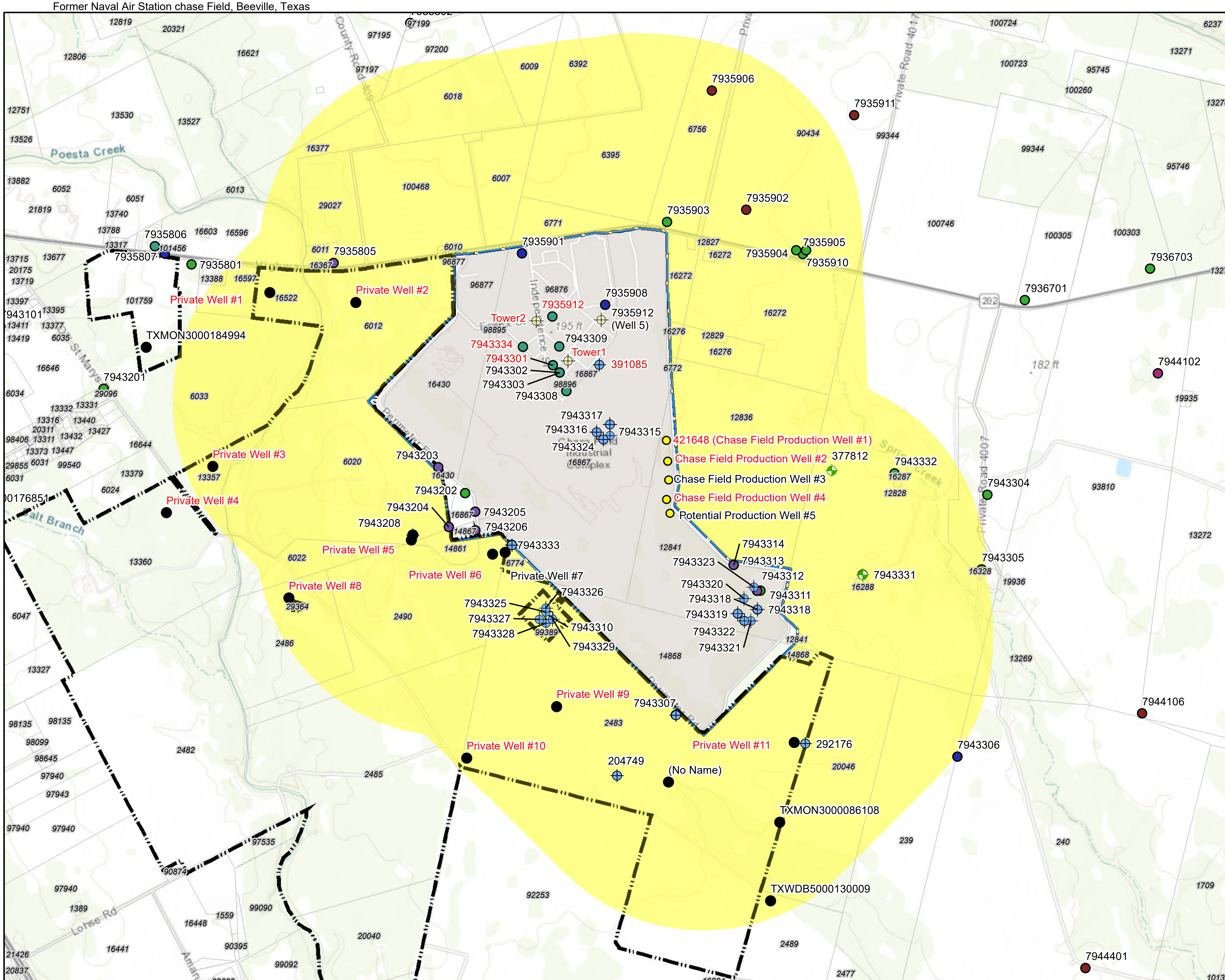
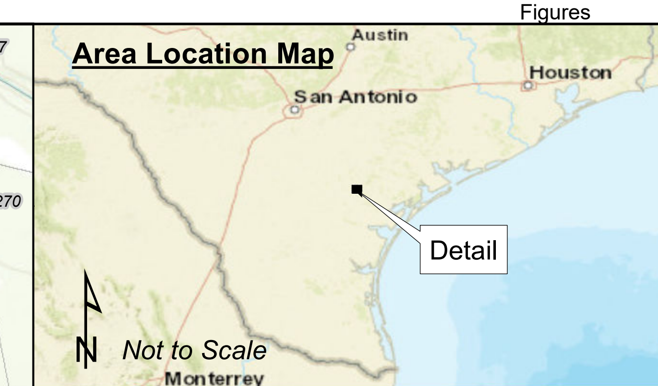

Poesta Creek
Salt Branch
Spring Creek
County Road 409
Private Road 4017
Private Road 4007
Lohse Rd
202
Chase Field Industrial Complex
195 ft
182 ft
7935906
7935911
7935903
7935902
7935901
7935905
7935904
7935910
7936701
7936703
7944102
7935806
7935807
7935801
7935805
Private Well #1
Private Well #2
Private Well #3
Private Well #4
Private Well #5
Private Well #6
Private Well #7
Private Well #8
Private Well #9
Private Well #10
Private Well #11
TXMON3000184994
7943101
7943201
Tower2
7935912
7935908
7935912 (Well 5)
7943334
7943309
Tower1
7943301
7943302
7943303
391085
7943308
7943317
7943316
7943315
7943324
421648 (Chase Field Production Well #1)
Chase Field Production Well #2
377812
Chase Field Production Well #3
Chase Field Production Well #4
Potential Production Well #5
7943332
7943304
7943203
7943202
7943204
7943205
7943208
7943206
7943333
7943314
7943323
7943313
7943312
7943331
7943305
7943320
7943311
7943318
7943319
7943322
7943321
7943326
7943325
7943327
7943328
7943310
7943329
7943307
292176
204749
(No Name)
TXMON3000086108
TXWDB5000130009
7943306
7944106
7944401



LEGEND

- Supply Well
- City of Beeville Production Wells
- Water Supply Well (Drinking)
- Drinking Water Supply Well
- Groundwater Monitoring Well
- Domestic
- Irrigation
- Plugged or Destroyed
- Public Supply
- Stock
- Unused
- 1 Mile Buffer of Former NAS Chase Field Boundary
- Ranch Property
- Parcels
- Former NAS Chase Field Boundary
- F01 Mile Buffer of Former NAS Chase Field Boundary

Notes:
RED Well Ids have been sampled for PFAS

*SOURCE: USGS, 1995 and NAVFAC SW, 1992.
NAS = Naval Air Station

Basemap Source/Aerial Photo: ESRI ArcGIS online service 2022

0 0.25 0.5 1
Miles
1 Inch = 0.5 Miles

Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances Sites
Preliminary Assessment
Former Naval Air Station Chase Field, Beeville, Texas

Well Locations

PROJECT NO.:	5026-19-4022
DATE:	May 2022
DRAWN BY:	KOB
CHECKED BY:	KS

FIGURE 3

MMAC-4010-4022-0069

Date: 5/10/2022 Path: D:\FilesFromWork\5026-19\4022_PFAS_PA_Chase\GIS\Figs_Chase_PFAS_PA_Feb2020\Fig03_Chase_PFAS_PA_Wells.mxd

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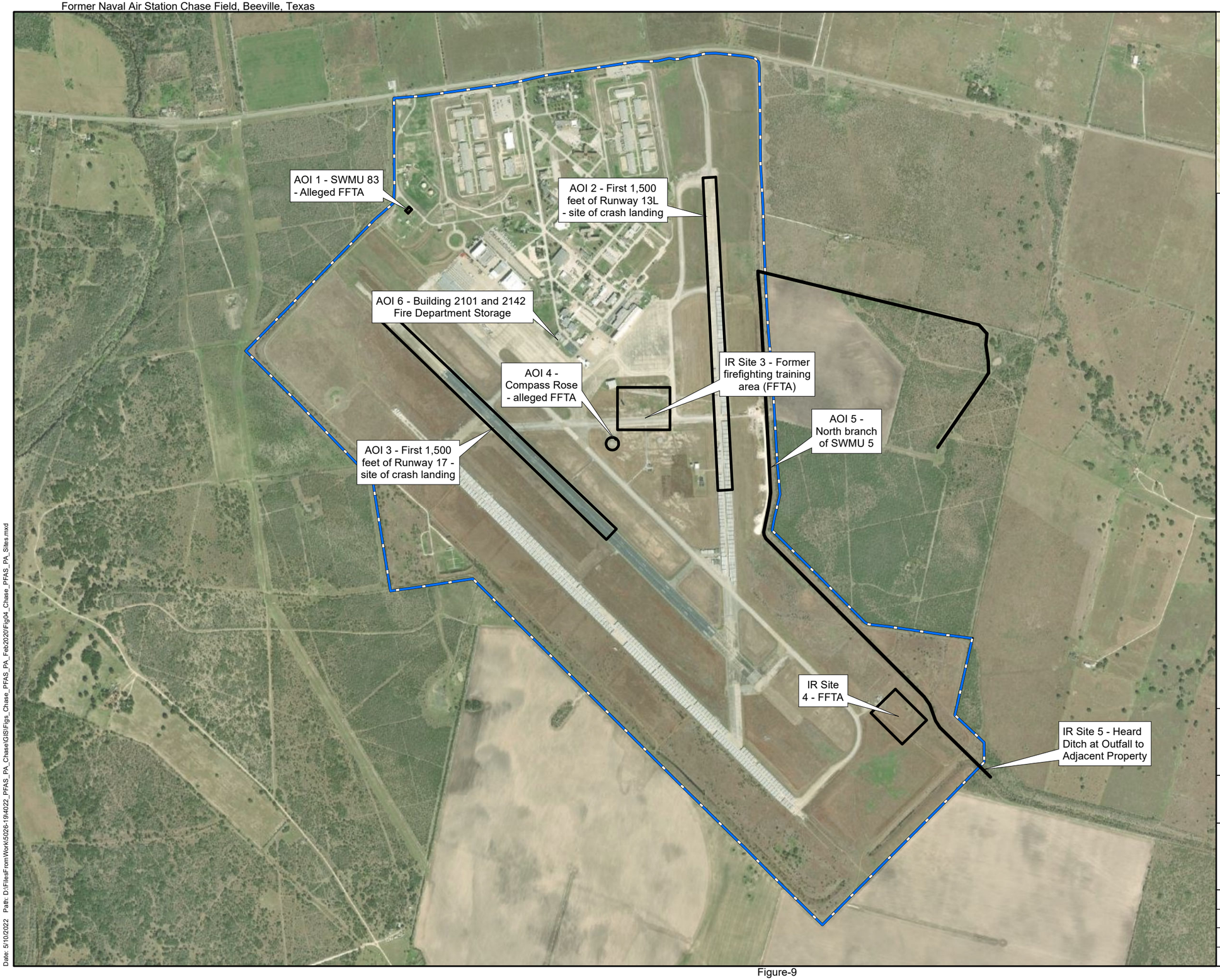

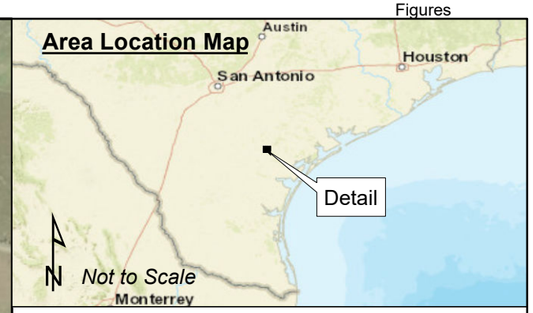

LEGEND

- Potential PFAS Site
- Former NAS Chase Field Boundary

Notes:
AOI = Area of Interest
FFTA = Former Fire Fighting Training Area
IR = Installation Restoration
NAS = Naval Air Station
PFAS = Per-and Polyfluoroalkyl Substance
SWMU = Solid Waste Management Unit

Basemap Source/Aerial Photo: ESRI ArcGIS online service 2022

N

0 750 1,500 3,000
Feet
1 Inch = 1,500 Feet

Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances Sites
Preliminary Assessment
Former Naval Air Station Chase Field, Beeville, Texas

Potential PFAS Areas of Interest

PROJECT NO.:	5026-19-4022
DATE:	May 2022
DRAWN BY:	KOB
CHECKED BY:	KS

NAVFAC

FIGURE 4

Date: 5/10/2022 Path: D:\FilesFromWork\5026-19\4022_PFAS_PA_Chase\GIS\Figs_Chase_PFAS_PA_Feb2020\Fig04_Chase_PFAS_PA_Sites.mxd

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Appendix A:
Interview Logs

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General Information Questionnaire

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
Former Naval Air Station Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: February 20, 2020

Interviewer:

Name of Contact:

Position/Role: Former Firefighter of NAS Chase Field

Phone Number: 361-362-4409

Email Address:

Years at or familiar with the installation (dates, if possible): Dec. 1972 – Jun. 1992

If a question below is not applicable, please enter "NA" in the space provided.

Please list all former firefighter training areas, electroplating operations, crash sites, landfills, active and closed environmental sites, and any areas where waste material biosolids and sludge from wastewater treatment plants may have been spread. Specifically, focus on any of the sites above where AFFF or materials known to contain PFAS were used, stored, and/or disposed of.

Firefighter training areas: Sites 3 and 4

Crash Sites: Runway 13L & Runway 17

Have previous investigations of soil, surface water, groundwater, and/or wastewater been performed for PFAS? If so, were PFAS detected?

Yes. Yes.

Were there any on-base fire stations? If so, where were they located?

Yes. Off the parking apron next to the base operations building

General Information Questionnaire

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
Former Naval Air Station Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022**

Are there any known former firefighting equipment calibration or testing areas at the base other than the training areas and the fire station? If so, where were they located?

Yes. Compass Rose next to Site 3 to the west.

Were there any truck washing stations/areas at the base for fire trucks or emergency vehicles? If so, where were they located?

Yes. South of fire station.

Please list any areas (e.g., buildings, warehouses, hangars, fuel farms, gas stations) that contained fire suppression systems. Was aqueous film forming foam (AFFF) used in these systems? Were annual tests conducted? Are relevant as-built drawings available?

Unknown

Was AFFF present at the Installation and, if so, where was it used, stored and/or disposed of?

Yes. Stored at the fire station.

Are there any known spill/crash sites/fires at the base where AFFF could have been used?

Yes. Runway 13L and Runway 17

General Information Questionnaire

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
Former Naval Air Station Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022**

Are Accident and/or Fire Reports available for the known spill/crash sites/fires at the base where AFFF was used?

Unknown

Are there specific relevant documents available (include Administrative Record document number if possible)?

Unknown

Are there any drainage systems or body of water that may have received AFFF or runoff from any of the activities listed above? Are relevant as-built drawings available?

Yes. Open drainage ditch around base.

Were there any oil-water separators present at hangers or along runways?

Unknown

Are maps of the Installation (past and/or present) available, specifically with building numbers/function (i.e., industrial operation buildings)?

Unknown

General Information Questionnaire

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
Former Naval Air Station Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022**

Are any maps or reports on nearby drinking water or irrigation wells available?

Unknown

Are geographic information system shape files of the Installation available?

Unknown

List of any additional potential interviewees and contact information:

Unknown

Additional comments or relevant information?

Appendix B:
Research Logs

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Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: March 4, 2020 **Researcher:** Kimberly Shiroodi

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name:	Final Environmental Baseline Survey for Transfer to Bee County Redevelopment Authority
Document Author:	NAVFACENGCOM South Division
Document Date:	April, 1997
File Name:	199704_NAVFACENGCOM South-Final Environmental Baseline Survey for Transfer to Bee County Redevelopment Authority

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

IR Sites 3 and 4: former firefighting training areas. Flammable liquids were disposed at these two sites.

IR Sites 1 and 2: Before 1983, most waste material was disposed at two landfills on the subject property (IR Sites 1 and 2).

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 7, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name: Solid Waste Management Unit Documents

Document Author: NAVFAC Southern

Document Date: September 1, 1995

File Name: 19850901_ NAVFAC_ Solid Waste Management Unit Documents

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

This is a collection of documents that detail assessment and remedial activities at SWMUs 1 to 112, which include landfill disposal areas, wash racks, oil/water separators, and fire fighting training areas.

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: 12/20/2019 **Researcher:** Kimberly Shiroodi

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name:	Initial Assessment Study Report
Document Author:	Envirodyne Engineers, Inc.
Document Date:	September 1, 1985
File Name:	19850901_Envirodyne_ Initial Assessment Study Report_Sites 1, 2, 3, 4

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"*(2.4.1 Site 1, Northwest Rubble Disposal Area)* Site 1 is a landfill encompassing nearly 18 acres located about 300 feet west of the pistol range, Structure 1063. The site has operated continuously as a landfill and general installation rubble disposal area since 1954. However, disposal of industrial wastes was discontinued in the early 1980s …Wastes from oil/water separators and grease traps were also disposed of at the site.

(2.4.2 Site 2, Southeast Disposal Area) Site 2 is a landfill encompassing nearly 12 acres located in the southeastern portion of the station. The site is immediately adjacent to the transmitter station, Building 2925. The site was used from 1965 to 1970 for the disposal of wastes … the landfill was reportedly used for the disposal of empty pesticide containers, wastes from oil/water separators and grease trap wastes.

(2.4.3 Site 3, Old Fire Fighting Training Area) The site consisted of two shallow, unlined, burning pits, each approximately 40 feet in diameter and 2 feet deep. The pits were used for training exercises from 1956 until 1972. Typically, waste liquids were transported to the site from the Public Works shops, Aircraft Intermediate Maintenance Department (AIMD), and the squadrons in bowsers or a 500 gallon tank truck. The liquids either drained directly into one of the pits, or if the pits were filled, drained into drums for later use. Practice fires were suppressed with a protein foaming agent and water.

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

(2.4.4 Site 4, Fire Fighting Training Area) Site 4 is located approximately 400 feet southeast of the high power turn-up facility along the east side of the dirt access road. The site consists of two burning pits, each about 40 feet in diameter and 2 feet deep, and a water retention area with dimensions of 210 feet by 210 feet. The pits have been used for fire training exercises since 1972. Although the training area is still used, the operation has changed significantly. Currently waste fuels and oils are used in the practice burns. However, until about 1984, other waste liquids were used at the site. The waste liquids collected at the Public Works shops, AIMD and the squadrons were transported to the site in bowsers or a 500 gallon tank truck. Until the installation of a 6,500 gallon above ground storage tank at the site in 1975, the liquid wastes were either drained into one of the pits, or if the pits were filled, drained into drums for subsequent use. Practice fires were generally suppressed with a water fog and Aqueous Film Forming Foam (AFFF).

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 7, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name:	**RCRA Facility Assessment Report with Transmittal**
Document Author:	United States Environmental Protection Agency, Region VI (EPA)
Document Date:	January 17, 1992
File Name:	19920117_EPA_RCRA Facility Assessment Report with Transmittal

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"*(Executive Summary)* According to base personnel, waste handling and disposal practices have changed dramatically since the mid 1950s to the present day. Flammable solvents the oily wastes were originally deposited in unlined pits for firefighter training exercises. The burning of solvent waste in these pits continued until the mid-1980s. Burning of the waste oils ceased in approximately 1989. Nonflammable liquid wastes and solid wastes as well as the flammable liquid wastes have been sent off-base for recycling or deep well injection. Hazardous solid wastes at the base were disposed of on-base until the mid-1980s, when they also began being sent off-base for disposal …

Fourteen SWMUs involve potential releases from underground storage tanks (USTs) (SWMUs #10, #11, #34-34, #50, #79, #82, #85, #87, #92, #93, and #102). Twelve involve potential releases to subsurface soils from oil/water separators and mud traps (SWMUs #14, #29, #38, #44, #51, #59, #63, #69, #73, #74, #78, and #81)."

Research Log

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022**

The unit (SWMU #47), the Public Works Paint Collection Area, is located approximately 10 feet southwest of the present Public Works Paint Collection Area (SWMU #46) and approximately 100 feet south of the Building 1046 Washrack Oil/Water Separator …

The unit (SWMU #49) is the Building 1046 Vehicle Washrack Oil/Water Separator located approximately 30 feet south of Building 1046. The unit consist of an oil/water separator which receives waste water from the vehicle washrack on the south side of Building 1046.

The unit (SWMU #51) is the Oil/Water Separator located approximately 5 feet south of Building 1046.

The unit (SWMU #59) the Garbage Truck Washrack Mudtrap is located approximately 200 feet southwest of the Building 2980 Hazardous Waste Transfer Facility and approximately 400 feet west of the Dumpster Washrack Oil/Water Separator (SWMU #63). The unit consists of a washrack and associated mudtrap for garbage truck cleaning.

The unit (SWMU #63) is the Dumpster Washrack oil/water separator located 100 feet south of the Sanitary Sewer Lift Station (SWMU 60).

The unit (SWMU #73-1: listed in FA Work Plan as SWMU #74) is an Oil/Water Separator located on the northeast side of Hanger 2015 between SWMU #73-2 and SWMU #81.

The unit (SWMU #73-2: listed in FA Work Plan as SWMU # 74) is an Oil/Water Separator located on the northeast side of Hanger 2015.

The unit (SWMU #73-3) is the Hangar 2015 Washrack and Oil/Water Separator located in the Building 2166 area. The unit consist of an aircraft washrack and the associated oil/water separator which receives wastewater from jet aircraft cleaning operations.

The unit (SWMU #74-1) is an Oil/Water Separator located on the northeast side of Hanger 2009 between SWMU #74-2 and SWMU #69. The unit receives oily waste runoff from the hangar.

The unit (SWMU #74-2) is an Oil/Water Separator located on the northeast side of Hanger 2009 between SWMU #74-1 and SWMU #81. The unit receives oily waste runoff from the hangar.

Due to the close proximity of several units, SWMUs 78, 79 and 80 were combined into one unit, SWMU #78. The units are described as the following: SWMU #78, the Hangar 2137 and Oil/Water Separator; SWMU #79, the Hangar 2137 Washrack UST; and SWMU #80, the Hangar 2137 Washrack UST.

The unit (SWMU #81) is the Building 2133 Oil/Water Separator located near Hangar 2009. The unit consist of an oil/water separator that services the AIMD Shop in Building 2133.

The unit (SWMU #83) is a former Fire Fighter Training Area that supposedly existed in the vicinity of Building 1016. The unit, allegedly used from the mid-1950's to the mid-1960's, was reportedly an unlined pit approximately 30 feet in diameter. The area is presently an open field adjacent to a taxiway.

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 10, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name:	Fact Sheet Base Closure
Document Author:	Captain H. M. Durgain, Commanding Officer, Department of Navy (DON)
Document Date:	March 30, 1992
File Name:	19920330_DON_Fact Sheet Base Closure

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"On July 1991, Naval Air Station (NAS) Chase Field and the Naval Auxillary Air Field (NALF) Goliad were listed for closure by the Base Realignment and Closure Committee.

Some sites being investigated for possible environmental actions include:

- Old Landfills (past waste disposal sites that are no longer used)
- Burn pits (used to practice firefighting)
- Oil water Separators

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: February 13, 2020 **Researcher:** Sherry Zheng

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name: Facility Assessment Work Plan

Document Author: Ensafe/Allen & Hoshall (Ensafe)

Document Date: April 22, 1992

File Name: 19920422_Ensafe_Facility Assessment Work Plan

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Notes:

SWMU 5, Stormwater Drainage Ditches;

SWMU 38, Building 2166 Waste Oil UST and Oil/Water Separator;

SWMU 49, Building 1046, Vehicle Wash rack, Oil/Water Separator;

SWMU 5I Building 1046 Oil/Water Separator;

SWMU 58, Fonner Firefighting Training Area, Waste Oil Tank Area;

SWMU 62, Sludge Beds;

SWMU 63, Dumpster Wash rack, Oil/Water Separator;

SWMU 69, Hangar 2009, Wash rack 2009 and Oil/Water Separator;

SWMU 73, Hangar 2015, Wash rack and Oil/Water Separator;

SWMU 74, Hangars 2009 and 2015 Oil/Water Separators;

SWMU 78, Hangar 2137, Wash rack and Oil/Water Separator;

SWMU 79, Hangar 2137, Wash rack UST;

SWMU 80, Hangar 2137, Lift Station;

SWMU 81, Building 2133 Oil/Water Separator;

SWMU 83, Alleged FFTA Near Building 1034;

SWMU 108: Goliad NALF, Old Fire Fighting Training Area;

SWMU I 09: Old Landfill Near Fuel Facility, Goliad NALF;

SWMU 110: Old Landfill, Goliad NALF;

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: February 13, 2020 **Researcher:** Sherry Zheng

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name:	Environmental Baseline Survey for Transfer Chase Park Housing with Transmittal NAS Chase Field TX
Document Author:	NAVFAC Southern Division
Document Date:	November 1, 1992
File Name:	1992_NAVFAC_Environmental Baseline Survey for Transfer Chase Park Housing

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 7, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name: Final Facility Assessment Report

Document Author: Ensafe/Allen & Hoshall (Ensafe)

Document Date: March 1, 1993

File Name: 19930301_ENSAFE_Final Facility Assessment Report

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"SWMU #5 is a series of open ditches and culverts which collect stormwater as a well as some industrial wastewater from the interior of the base and discharge the water to large ditche that form a perimeter around the base … One of primary interior ditches which drain into the perimeter ditches is located in the northeast quadrant of the base near Hangar 2015, the hazardous waste storage area, the former sewage treatment plant, and the garbage truck and dumpster washracks…

The unit (SWMU #14) is a GSE shop oil/water separator located outside Building 2137.

The unit (SWMU #29) are the Hydraulic Shop oil/water separators located outside of the western wall of the Hydraulics Shop in Building 2137.

The unit (SWMU #38) is a Waste Oil UST and Oil/Water Separator located approximately 200 feet northwest of the Hanger 2015 washrack.

The unit (SWMU #44) consists of a separator and piping associated with Building 2066.

Research Log

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022**

The unit (SWMU #47), the Public Works Paint Collection Area, is located approximately 10 feet southwest of the present Public Works Paint Collection Area (SWMU #46) and approximately 100 feet south of the Building 1046 Washrack Oil/Water Separator …

The unit (SWMU #49) is the Building 1046 Vehicle Washrack Oil/Water Separator located approximately 30 feet south of Building 1046. The unit consist of an oil/water separator which receives waste water from the vehicle washrack on the south side of Building 1046.

The unit (SWMU #51) is the Oil/Water Separator located approximately 5 feet south of Building 1046.

The unit (SWMU #59) the Garbage Truck Washrack Mudtrap is located approximately 200 feet southwest of the Building 2980 Hazardous Waste Transfer Facility and approximately 400 feet west of the Dumpster Washrack Oil/Water Separator (SWMU #63). The unit consists of a washrack and associated mudtrap for garbage truck cleaning.

The unit (SWMU #63) is the Dumpster Washrack oil/water separator located 100 feet south of the Sanitary Sewer Lift Station (SWMU 60).

The unit (SWMU #73-1: listed in FA Work Plan as SWMU #74) is an Oil/Water Separator located on the northeast side of Hanger 2015 between SWMU #73-2 and SWMU #81.

The unit (SWMU #73-2: listed in FA Work Plan as SWMU # 74) is an Oil/Water Separator located on the northeast side of Hanger 2015.

The unit (SWMU #73-3) is the Hangar 2015 Washrack and Oil/Water Separator located in the Building 2166 area. The unit consist of an aircraft washrack and the associated oil/water separator which receives wastewater from jet aircraft cleaning operations.

The unit (SWMU #74-1) is an Oil/Water Separator located on the northeast side of Hanger 2009 between SWMU #74-2 and SWMU #69. The unit receives oily waste runoff from the hangar.

The unit (SWMU #74-2) is an Oil/Water Separator located on the northeast side of Hanger 2009 between SWMU #74-1 and SWMU #81. The unit receives oily waste runoff from the hangar.

Due to the close proximity of several units, SWMUs 78, 79 and 80 were combined into one unit, SWMU #78. The units are described as the following: SWMU #78, the Hangar 2137 and Oil/Water Separator; SWMU #79, the Hangar 2137 Washrack UST; and SWMU #80, the Hangar 2137 Washrack UST.

The unit (SWMU #81) is the Building 2133 Oil/Water Separator located near Hangar 2009. The unit consist of an oil/water separator that services the AIMD Shop in Building 2133.

The unit (SWMU #83) is a former Fire Fighter Training Area that supposedly existed in the vicinity of Building 1016. The unit, allegedly used from the mid-1950's to the mid-1960's, was reportedly an unlined pit approximately 30 feet in diameter. The area is presently an open field adjacent to a taxiway.

Research Log

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
Naval Air Station Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022**

Date: January 6, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name: Final Site Investigation Report and Appendices A and B

Document Author: Ensafe/Allen & Hoshall

Document Date: October 19, 1993

File Name: 19931019_Ensafe_Final SI Report + App A and B_Sites 1, 2, 3, 4_

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

(1.0 Introduction) This Site Inspection Report represents the final element in the second phase of the Naval Assessment and Control of Installation Pollutant (NACIP) program inspection at NAS Chase Field …

(1.3 Waste Disposal) The daily functions of aircraft operations, maintenance and repair produce wastes such as jet fuels, solvents, paints and thinners. The activity contains buildings for aircraft storage and repair, quarters and services for base personnel, support utilities and public works. Maintenance of this infrastructure also produces wastes such as paints, thinners, solvents, asbestos debris from buildings, and rubble from runway and building construction. Before 1983, the bulk of this waste material was disposed of through two landfill sites on the activity. In addition, flammable liquids have been disposed of through two firefighting training areas on the activity. The disposal of these operational wastes has shifted from on-activity to off-activity sites during the past 10 years.

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 7, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name: Work Plan Decontamination of 12 Solid Waste Management Units

Document Author: Morrison Knudsen Corporation (MK)

Document Date: May 20, 1994

File Name: 19940520_MK_ Work Plan Decontamination of 12 SWMUs

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

(1.1 Background) This work will also be conducted under this work plan and includes: (i) the sampling of seven transformers, the transformer pads and surrounding soils for PCBs; and (ii) conducting planimetric and topographic surveys for two landfill, IR Site 1 and IR Site 2.

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 10, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name:	Facility Investigation Summary Report Solid Waste Management Unit 100
Document Author:	NAS Dallas Housing
Document Date:	November 9, 1994
File Name:	19941109_NAS Dallas Housing_Facility Investigation Summary Report_SWMU 100

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"*(1.0 Background Information)* SWMU #100 is an area of pesticide discharge that covers approximately 1 square yard and is located outside Building 1093 Former Pest Control Shop. … In June 1992, a Facility Assessment was conducted to determine if any contaminants were present at the site.

(2.0 Site Investigation) A total of 24 soil samples were collected from thirteen locations"

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: 12/20/2019 **Researcher:** Kimberly Shiroodi

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name: Fact Sheet Chase Closure Report

Document Author: United States Department of the Navy

Document Date: January 1, 1995

File Name: 19950101_DON_Fact Sheet Closure Report

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

Site 3 consists of a flat, sandy, and grassy area with two unlined burn pits immediately west-northwest of the intersection of former Taxiways A and Y-2 and west of the air traffic control tower. The pits, used for firefighting training exercises from 1956 to 1972, were originally 2 feet deep, but have since been covered with fill material …

Site 4 is a former fire fighting training area approximately 400 feet southeast of the high power turn-up facility on the southside of the base. The site consists of two burn pits approximately 40 feet in diameter and 2 feet deep. Both pits are surrounded by a retention berm which forms an enclosure that is approximately 120 feet long on each side. One pit was 2 feet deep but is presently marked by a grassy depression. The second pit is lined with concrete to improve liquid retention. The pits have been used for fire training exercises since 1972. No groundwater contamination was identified at this site during the SI.

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 21, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name: Solid Waste Management Unit Documents

Document Author: Department of the Navy Naval Facilities Engineering Command Southwest Division (NAVFAC SW)

Document Date: September 1, 1995

File Name: 19950901_NAVFAC SW_Solid Waste Management Unit Documents

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"*(SWMU 14 GSE SHOP OIL-WATER SEPARATOR BUILDING 2137; 1.0 Introduction)* This unit separates oil from water that runs off the hangar deck and other areas inside Building 2137. This oil-water separator began operation in 1970 and is currently inactive.

(SWMU 29 HYDRAULIC SHOP OIL-WATER SEPARATORS BUILDING 2137; 1.0 Introduction) This unit consists of two oil-water separators outside the western wall of the Hydraulics Shop in Building 2137. This unit managed oily waste and runoff from Hangar 2137 and flow from the berm drains of the tire/engine cleaning shop. This unit began operation in approximately 1970 and is currently inactive.

(SWMU 38 WASTE OIL UST AND OIL-WATER SEPARATOR BUILDING 2137; 1.0 Introduction) Solid waste management unit (SWMU) 38, also listed as underground storage tank 2166-A, consists of an oil-water separator and a 550-gallon waste oil tank at the fuel truck parking circle at Building 2166. The unit is approximately 200 feet northwest of the Hangar 2015 washrack. The unit receives runoff from storms and large vehicle maintenance operations at the fuel truck parking. It was constructed in 1985.

Research Log

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
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(SWMU 44 PIPING AND SEPARATOR BUILDING 2066; 1.0 Introduction) Solid waste management unit (SWMU) 44 consists of an oil-water separator and piping associated with Building 2006. The piping connects Building 2066 to the separator. This unit began operation in approximately 1970 and is currently inactive.

(SWMU 58 FORMER FFTA WASTE OIL TANK AREA; 1.1 Background) In 1989, a 6,500-gallon fiberglass waste oil AST was installed at the NAS Chase Field Firefighter Training Area (later identified as Solid Waste Management Unit [SWMU] # 58) to provide fuel for fire training exercises. A tank failure resulted in the removal of this tank from service in 1989.

(SWMU 63 DUMPSTER WASHRACK OIL-WATER SEPARATOR; 1.0 Introduction) Solid waste management unit (SWMU) 63 consists of a concrete pad used to clean dumpsters. The pad drains to an oil-water separator. The unit is across a gravel road approximately 100 feet south of the Sanitary Sewer Lift Station. This unit operated between approximately 1975 and 1986.

(SWMU 69 HANGAR 2009 WASHRACK AND OIL-WATER SEPARATOR; 1.0 Introduction) Solid waste management unit (SWMU) 69 is the Hangar 2009 washrack and oil-water separator near Building 2009. The unit consists of an oil-water separator and an aircraft washrack that received waste from jet aircraft cleaning. This unit has operated since the mid-1950s and is currently inactive.

(SWMU 71 ASPA 3003; 1.0 Introduction) Solid waste management unit (SWMU) 71 consists of a partially enclosed aboveground structure used for storing 55-gallon drums of hazardous and nonhazardous waste generated on-base. The unit is approximately 200 feet southwest of the Hangar 2015 washrack. SWMU 71 began operation in approximately 1987 and is currently inactive.

(SWMU 73 OIL-WATER SEPARATORS BUILDING 2015; 1.0 Introduction) Solid waste management unit (SWMU) 73 is the Hangar 2015 washrack and oil-water separator near Building 2166. The unit consists of an aircraft washrack and the associated oil-water separator which receives wastewater from jet aircraft cleaning operations. The unit has reportedly been in operation since the mid-1950s and is currently inactive.

During a Facility Assessment (FA) conducted in 1992, three oil-water separators were placed under SWMU 73 (Appendix A - Site Location Map) and renamed from their Resource Conservation and Recovery Act (RCRA) FA designations.

(SWMU 74 HANGARS 2009 AND 2015 OIL-WATER SEPARATORS; 1.0 Introduction) Solid waste management unit (SWMU) 74 consists of four oil-water separators on the northeast side of Hangars 2009 and 2015. The separators managed oily waste from runoff within the hangars. The runoff also could contain small amounts of waste such as solvents or paint. The separators began operation in the mid-1950s.

During a Facility Assessment (FA) conducted in 1992, two oil-water separators were investigated under SWMU 74 and the other two were addressed in the SWMU 73 report (Appendix A – Site Location Map) and renamed from The Resource Conservation and Recovery Act (RCRA) FA designation.

Research Log

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
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(SWMU 78 HANGAR 2137 WASHRACK AND OIL-WATER SEPARATOR; 1.0 Introduction) Solid waste management unit (SWMU) 78 consists of an aircraft washrack and a cast iron oil-water separator. The unit is approximately 100 feet west of SWMU 76. The unit received waste from cleaning jet aircraft. This unit began operations in approximately 1970 and is currently inactive.

Due to their proximity, SWMUs 78, 79, and 80 were combined into one unit. The units are described as the following: SWMU 79, the Hangar 2137 Washrack underground storage tank (UST), and SWMU 80, the Hangar 2137 lift station.

(SWMU 79 HANGAR 2137 WASHRACK UST; 1.0 Introduction) Solid waste management unit (SWMU) 79 consists of an underground storage tank (UST) that received waste oil from the Hangar 2137 washrack and oil-water separator, approximately 30 feet to the south. The unit received waste from cleaning jet aircraft. This unit began operation in 1970 and is currently inactive.

Due to their proximity, SWMUs 78, 79, and 80 were combined into one unit. The units are described as the following: SWMU 79, the Hangar 2137 Washrack underground storage tank (UST), and SWMU 80, the Hangar 2137 lift station.

(SWMU 80 HANGAR 2137 LIFT STATION; 1.0 Introduction) Solid waste management unit (SWMU) 80 consists of a wet well lift station that pumped wastewater from the Hangar 2137 oil-water separator. This unit is approximately 40 feet northeast of the Hangar 2137 washrack and oil-water separator. The unit received wastewater from cleaning jet aircraft on the washrack. This unit began operation in approximately 1975 and is currently inactive.

(SWMU 81 HANGAR 2133 OIL-WATER SEPARATOR; 1.0 Introduction) Solid waste management unit (SWMU) 81 was an oil-water separator that served the Aircraft Intermediate Maintenance Department ordnance shop in Building 2133. The unit was approximately 200 feet northwest of Hangars 2009 and 2015 oil-water separator. This unit received oily waste from operations in Building 2133. This unit began operations in approximately 1954 and was removed from service in 1993.

Research Log

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022**

Date: January 22, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name:	Draft Environmental Baseline Survey for Transfer to Bee County Redevelopment Authority
Document Author:	Department of the Navy Naval Facilities Engineering Command Southwest Division (NAVFAC SW)
Document Date:	February 1997
File Name:	19970201_NAVFAC SW_Draft Baseline Survey and FOST

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"*(Executive Summary)* This Environmental Baseline Survey for Transfer (EBST) documents the environmental condition of the property and structures on the tract of land proposed for transfer to the Beeville/Bee County Redevelopment Authority … In addition to lR Sites 1 and 2, four other sites were evaluated under the Navy IR Program including two firefighting training areas (IR Sites 3 and 4), the major ditch that drains storm water from the subject property (IR Site 5), and all potable water wells.

(5.1 Hazardous Substance/Waste Management Practices) Before 1983, most waste material was disposed at two landfills on the subject property (IR Sites 1 and 2). In addition, flammable liquids were disposed at two firefighter training operation sites on the subject property (IR Sites 3 and 4).

(5.7 Storage Tanks and Oil-Water Separators) Most oil-water separators were removed, but those in good condition were left in place after decontamination (decontamination reports were published for each unit in September 1996).

Research Log

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022**

(5.9 Site Descriptions) IR Site 1 was used for dumping municipal garbage and industrial wastes from NAS Chase Field before regulations went into effect. Four monitoring wells were installed around the site to detect any release from the landfill, but no release was found.

IR Site 2 was used for dumping municipal garbage and industrial wastes from NAS Chase Field before regulations went into effect. Four monitoring wells were installed around the site to detect any release from the landfill, but no release was found.

IR Site 3 is immediately west-northwest of the intersection of Taxiways A and Y -2 and west of the air traffic control tower. The site consisted of two pits used for firefighter training exercises from 1956 to 1972. During 1992 and 1993 field investigations, six soil borings and four monitoring wells were completed, installed, and sampled onsite.

IR Site 4 is a former firefighting training area (FFT A) approximately 400 feet southeast of the high-power tum-up facility along the east side of the din access road. The site comprises two bum pits were used for fire training exercises since 1972.

(Building 2101 – Fire Department Stowage) This facility operated as a general storage area as well a flammables storage locker. Grease and paint stains were observed on the floor. All hazardous materials were removed and properly disposed.

(Building 2142 – Fire Station) Visual inspection did not identify the presence or likely presence of hazardous substances or petroleum product releases."

(Exhibit F TNRCC Correspondence)

- SWMU 73-3: Hangar 2015 Washrack and Oil/Water Separator
- SWMU 78, 79, 80: Hangar 2137 Oil/Water Separator, Hangar 2137 Washrack and Sump
- SWMU 81: Bldg 2133 Oil/Water Separator
- SWMU 102: JP-5 Unloading Facility Sump and UST – Chase recommends that the Oil/Water Separator be removed…
- SWMU 111: Bldg 9014 Goliad Fuel Facility - Chase recommends that the Oil/Water Separator be removed
- SWMU 83: Former Fire Fighter Training Area Near Bldq. 1016 - Additional wells should be installed downqradient of the unit and monitored semi-annually for constituents which were used for fire training purposes.

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 8, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name: Final Closure Report for IR Sites 1 and 2

Document Author: Ensafe/Allen & Hoshall (Ensafe)

Document Date: November 1, 1997

File Name: 19971101_Ensafe_Final Closure Report for IR Sites 1 and 2

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

(1.0 Introduction) The Department of the Navy, Southern Division, Naval Facilities Engineering Command is submitting this report to complete the post-closure monitoring requirements of the approved closure plan for the landfills at Installation Restoration (IR) Program Site 1 and 2 … The landfills were capped in 1995 and a Landfill Completion Report was submitted to TNRCC in January 1996.

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: February 13, 2020 **Researcher:** Sherry Zheng

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name: Final Closure Report for SWMU 49, NAS Chase Field, Beeville, Texas

Document Author: Texas Commission of Environmental Quality (TCEQ)

Document Date: January 28, 1998

File Name: 19980128_TCEQ_Final Closure REport for SWMU 49

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

SWMU 49 consists of an oil/water separator that received wastewater from the vehicle wash rack on the south side of Building 1046. This unit began operation in the 1940s. It became inactive in 1993.

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 21, 2020 **Researcher:** Tyler Patel

Type of Research:

	Administrative Record/NIRIS
X	Online Research
	Miscellaneous Document Review

Document Name:	Fire consumes 640 acres near Chase Field Industrial Complex and Airport
Document Author:	Beeville Bee Picayune
Document Date:	March 5, 2009
File Name:	20090305_Beeville Bee_Fire consumes 640 acres near Chase Field Industrial Complex and Airport

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"Several wildfire conditions raised their ugly head with a vengeance Wednesday afternoon when about 640 acres near the Chase Field Industrial Complex and Airport burned …

Firemen in brush trucks, compressed air foam trucks and other vehicles rushed into the field trying to get the fire out … "

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 10, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name:	Final Sampling and Analysis Plan for Initial Assessment of PFCs or PFAS Sites at Various Base Realignment and Closure (BRAC0 Installations
Document Author:	Trevet
Document Date:	October 1, 2016
File Name:	20161001_Trevet_Final Well Searches Around Bases with Potential PFAS at Various BRAC Installations

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"*(Section 9.1 Potential PFAS Sites)* There are two potential PFAS Sites at former Naval Air Station Chase Field:

- Site 3: Former Fire Fighting Training Area
- Site 4: Former Fire Fighter Training Area

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 7, 2020 **Researcher:** Tyler Patel

Type of Research:

	Administrative Record/NIRIS
X	Online Research
	Miscellaneous Document Review

Document Name: Morris retires as fire chief

Document Author: Beeville Bee Picayune

Document Date: January 6, 2017

File Name: 20170106_Beeville Bee_Morris retires as fire chief

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

This article details the career of Beeville Volunteer Fire Department Chief Donald C. “Donnie” Morris.

Several mentions of fire fighting compressed air foam being used to fight Beeville fires, including fires at NAS Chase Field.

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 10, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name:	Final Sampling and Analysis Plan for Initial Assessment of PFCs or PFAS Sites at Various Base Realignment and Closure (BRAC) Installations
Document Author:	Multi-Media Environmental Compliance (MMEC) Group
Document Date:	October 10, 2017
File Name:	Final_TO 0008 SAP Addendum_NAS Chase Field_Deliverable_101017

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"*(Executive Summary)* This SAP provides details for collection of groundwater from monitoring wells and water supply well locations in the vicinity of Sites 3 and 4 at former Naval Air Station (NAS) Chase Field. All samples collected will be analyzed for perfluorooctanesulfonate (PFOS), perfluorooctanoic acid (PFOA), and perfluorobutanesulfonic acid (PFBS) and 13 additional PFAS compounds…

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: January 7, 2020 **Researcher:** Tyler Patel

Type of Research:

x	Administrative Record/NIRIS
	Online Research
	Miscellaneous Document Review

Document Name: Final Drinking Water Survey Report

Document Author: Multi-Media Compliance Group (MMEC)

Document Date: March 5, 2019

File Name: 20190305_MMEC_ Final Drinking Water Survey Report_Sites 3 and 4

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

(Executive Summary) Field activities were conducted in accordance with the regulatory agency-approved Final Former Naval Air Station Chase Field Sampling and Analysis Plan (SAP), Initial Basewide Assessment of Per- and Polyfluoroalkyl Substances (PFAS) in Groundwater (Final Installation-Specific SAP; MMEC Group, 2017b) in supplement to the Final Program SAP, Initial Assessment of PFAS Sites at Various Base Realignment and Closure Installations (Final Program SAP; MMEC Group, 2017a).

Following Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance (RG-428), Preparation of a Drinking Water Survey Report, dated January 2010, MMEC Group identified local public drinking water sources, completed a records survey of water wells, and completed a field survey. The field survey included a water well search area extending approximately 1 mile west of the western border of the site and around Sites 3 and 4 within the former Naval Air Station (NAS) Chase Field footprint. During the field survey, active and abandoned water wells in this area were located and evaluated, as shown in Figure 1.

This Drinking Water Survey Report refers to data and information from three areas identified with PFAS in the groundwater based on a preliminary investigation completed to date. In this report, the three PFAS areas discussed are the Ranch, Site 3, and Site 4, as shown in Figure 1.

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

(1 Groundwater Contamination) As part of the DON investigation approach, data were collected in 2017 within former NAS Chase Field at temporary wells within former fire-fighting areas Sites 3 and 4 as well as from Texas Department of Criminal Justice (TDCJ) and City of Beeville water supply wells. Analytical results indicate that shallow groundwater (less than 100 feet below ground surface [bgs]) has concentrations that exceed the TCEQ PCLs and the U.S. EPA LHA of 0.07 µg/L (PFOS and PFOA), resulting in two separate undefined groundwater plumes that encompass each site based on the investigation completed to date, as shown in Figure 1.

Groundwater data were also collected from water wells in July 2018 in the area west of the former NAS Chase Field on the Ranch property. Per- and polyfluoroalkyl substances (PFAS) were detected in groundwater samples collected from two livestock wells at concentrations above the TCEQ PCLs, resulting in an undefined groundwater plume that encompasses these two affected livestock wells, as depicted in Figure 1.

Research Log

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
Naval Air Station Chase Field, Beeville, TX
Contract N62470-19-D-4010, TO N6247320F4022**

Date: December 23, 2019 **Researcher:** Tyler Patel

Type of Research:

	Administrative Record/NIRIS
X	Online Research
	Miscellaneous Document Review

Document Name: No containments in 3 of 4 city wells

Document Author: Gary Kent, Beeville Bee Picayune

Document Date: May 27, 2019

File Name: 20190525_Chase Field_Beeville Bee_No Containments in 3 of 4 City Wells

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"Montez received the information Thursday morning from Barney, Base Realignment and Closure coordinator for the Naval Facilities Engineering Command in South Weymouth, Massachusetts. "The Navy has collected and analyzed samples from 3 of the 4 installed public water wells (planned) at the former Naval Air Station Chase Field," Barney said in the communication to Montez. "We note that analyzed PFAS compounds were not detected in any sample," the email stated.

The Texas Commission on Environmental Quality had informed Bee County on April 24 that tests had shown contamination of some wells in the area by Perfluorinated compounds…

Samples taken on CFPW #1, CFPW #2 and CFPW #4 showed no detectable levels of PFAS compounds, Barney said in the report.

CPFW #3 had not been tested but was scheduled for sampling later this year."

Research Log

**Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
Naval Air Station Chase Field, Beeville, TX
Contract N62470-19-D-4010, TO N6247320F4022**

Date: December 23, 2019 **Researcher:** Tyler Patel

Type of Research:

	Administrative Record/NIRIS
X	Online Research
	Miscellaneous Document Review

Document Name: Chemical threat to city's wells?

Document Author: Gary Kent, Beeville Bee Picayune

Document Date: July 18th, 2019

File Name: 20190718_Chase Field_Beeville Bee_Chemical Threat to City's Wells

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

"City Manager Joe B. Montez explained that city taxpayers had approved a $4.5 million groundwater project at the former naval air station. The four-well, groundwater complex, including water treatment equipment, a 250,000-gallon ground storage tank and connections to an existing pipeline to the city, currently is under construction on the eastern boundary of the property.

Montez told the council that the government had closed the base in 1991 and that all operations had been stopped by 1993. The Department of the Navy deeded the Chase Field property to the City of Beeville in 1998, and the city sold it to the newly created Bee Development Authority to be used for economic development.

In 2017, the Navy started investigating the possibility that firefighting foam used by the fire department at the base had contaminated the water table under the ground at Chase Field."

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
Naval Air Station Chase Field, Beeville, TX
Contract N62470-19-D-4010, TO N6247320F4022

Research Log

Preliminary Assessment Report for Base-Wide Investigation of Perfluorinated Compounds or Per- and Polyfluoroalkyl Substances (PFAS)
NAS Chase Field, Beeville, Texas
Contract N62470-19-D-4010, TO N6247320F4022

Date: 03/19/20 **Researcher:** Sherry Zheng

Type of Research:

	Administrative Record/NIRIS
x	Online Research
	Miscellaneous Document Review

Document Name: Crash kills second Navy pilot in week

Document Author: UPI (United Press International, Inc.)

Document Date: July 14, 1989

File Name: 1989_UPI_Crash kills second Navy pilot in week

Was a copy of the report obtained?

x	Yes
	No (provide reason)

Notes:

T-2 aircraft slammed into a vacant field between two parallel runways at Chase Field at the Beeville Naval Air Station on Thursday. The pilot was fatally injured.

A navy student pilot died of injuries suffered in a crash while practicing night navigation on Friday.

Appendix C:
Research Checklist

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Preliminary Assessment Research Checklist

Preliminary Assessment Report for Base-Wide Investigation of Per- and Polyfluoroalkyl Substances (PFAS)
Former Naval Air Station Chase Field, Beeville, TX
Contract N62470-19-D-4010, TO N6247320F4022

Installation POC/Personnel Interviews	Yes	No (include reason)
Did installation point of contact (POC) complete General Information Questionnaire?		No, POC does not have additional knowledge which would be useful.
Was additional contact personnel provided by POC (i.e. Fire chief, longtime base employee). If yes, provide names and contact information (position/rank, phone number, e-mail address) below.	x	
Contact Information:	*Former firefighter*	
Contact Information:		
Contact Information:		
Contact Information:		
Was a General Information Questionnaire completed for each person contacted?	x	
Additional sources or information:		

Administrative Record Research	Yes	No (include reason)
Searched the Administrative Record for documents pertaining to the installation?		No AR exists for former NAS Chase Field
Searched the following key words: AFFF, electroplating, wastewater treatment/sludge area (ponds), firefighting training area, landfill, oil/water separators, vehicle wash station, drum or soil storage, fire suppression systems, airfield, crash, and fire.		No AR exists for former NAS Chase Field
List additional words searched in online AR:	*No AR exists for former NAS Chase Field*	
Reviewed the Environmental Baseline Survey?	x	
Located and reviewed Environmental Impact Statements and/or Environmental Assessments?	x	
Were Real Property Records (as-built drawings) located?		No as build drawings were readily available
Were installation maps with building functions located?	x	
Located and reviewed additional reports requested from or suggested by POC?	x	
Located historic aerial surveys (1970 - present)?		Arial surveys not readily available
Additional sources or information:	Fact Sheets, Solid Waste Management Unit Documents, Closure Reports, RCRA Facility Assessment,	

Preliminary Assessment Research Checklist

Preliminary Assessment Report for Base-Wide Investigation of Per- and Polyfluoroalkyl Substances (PFAS)
Former Naval Air Station Chase Field, Beeville, TX
Contract N62470-19-D-4010, TO N6247320F4022

Online Research	Yes	No (include reason)
Internet search for installation and the following key words: crash, fire, as-build, master plan, real property, AFFF, PFC, and PFAS.	x	
List additional words searched in Index:	*Accident, burn, PFC, PFAS, foam, plating, disposal area, hangar, release, accident, burn*	
Performed a site search on Texas Commission on Environmental Quality?	x	
Performed a site search on EnviroStor?		No records available for Chase Field or Beeville. California specific database.
Performed a Water Purveyor and Water Supply Well search?	x	
List sites searched:	TCEQ Drinking Water Watch: *https://dww2.tceq.texas.gov/DWW/JSP/WaterSystem Detail.jsp?tinwsys is number=185&tinwsys st code=TX&wsnumberTX0130002%20%20%20&DWWState=TX*	
Searched the following websites:		
Environmental Protection Agency	x	
Notes:	EPA Enforcement and Compliance History Online: https://echo.epa.gov/detailed-facility-report?fid=110032992162#history110032992162	
Aviation Safety Network	x	
Notes:	No relevant records available.	
City and City Fire Department	x	
Notes:	No document search available	
Agency for Toxic Substances and Disease Registry		Not searched, California specific database
Notes:	NA	
Department of Toxic Substance Control Hazardous Waste Tracking		Not searched, California specific database
Notes:	NA	
Office of Emergency Services	x	
Notes:	Texas Office of Emergency Management	
State Environmental Department	x	
Notes:	Searched TCEQ Data and Records- Central File Room: https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_SEARCH	
Additional sources or information:	https://www.airwarriors.com/community/threads/nas-chase-field.38315/ https://www.skyhawk.org/article-unit/vt25	

Signature: Kimberly Shiroodi Date: 3/20/2020

Appendix D:
Response to Comments

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 22, 2020

Mr. David Barney
BRAC Environmental Coordinator
(Via email)
Naval Facilities Engineering Command
BRAC Program Management Office East
PO Box 169
South Weymouth, MA 02190

Re: TCEQ Approval with Modification of the *Draft Preliminary Assessment Report, Basewide Investigation of Per- and Polyfluoroalkyl Substances (PFAS)*, dated September 11, 2020
Former Chase Field Naval Air Station, Beeville (Bee County), Texas;
TCEQ SWR No. 68009; EPA ID No. TX3170024738; Customer No. CN600621155;
Regulated Entity No. RN101623072

Dear Mr. Barney:

The Texas Commission on Environmental Quality (TCEQ) received the above referenced document submitted by representatives of the United States Department of the Navy (DON) Naval Facilities Engineering Command. The September 11, 2020 *Draft Preliminary Assessment (PA) Report* provides the findings of research conducted to identify potential areas of interest (AOIs) at former NAS Chase Field (Site) where materials containing PFAS may have been stored, handled, discharged, disposed of, or used and their potential for release. Another objective of the PA Report was to identify the land use surrounding the installation (1 mile from the former NAS Chase Field installation boundary) and all drinking water sources within the area. The TCEQ also previously approved DON's *Drinking Water Survey Report* in letter issued December 23, 2019, documenting completion of a drinking water survey for Site in accordance with Section 26.408(b) of the Texas Water Code in response to an initial assessment of PFAS contamination in groundwater at the Site performed by representatives of DON during 2017 and 2018.

The September 11, 2020 Draft PA identified a total of 133 potential AOIs associated with the Site. The PA proposes to carry nine (9) of the sites for further investigation to determine the presence of PFAS:

- IR Site 3 – Former firefighting training area (FFTA)
- IR Site 4 – FFTA
- IR Site 5 – Heard Ditch at Outfall to Adjacent Property
- AOI 1 – SWMU 83 – Alleged FFTA
- AOI 2 – First 1,500 feet of Runway 13L – site of crash landing
- AOI 3 – First 1,500 feet of Runway 17 – site of crash landing
- AOI 4 – Compass Rose – alleged FFTA
- AOI 5 – North branch of SWMU 5
- AOI 6 – Buildings 2142 and 2101 – Fire Department Storage

Mr. David Barney
Page 2
December 22, 2020
TCEQ SWR No. 68009

Based on our review the TCEQ concurs with the recommendation to carry the referenced nine (9) sites for further investigation as modified by the following TCEQ comment:

1. Section 1.1 of the Draft PA notes the existence of TCEQ's 16 PFAS-related Tier 1 protective concentration levels (PCLs) in the Texas Risk Reduction Program (TRRP). However, the Draft PA suggests that for technical reasons stated in a DoD June 11, 2020 comment letter to TCEQ (i.e., regarding the use of PCLs as risk assessment screening values and as cleanup standards in CERCLA investigations with PFAS at Texas Military Installations), the TCEQ's PCLs will be used and included for comparative purposes only. As an update, the TCEQ issued a response letter on October 23, 2020 based on our review of DoD's June 11, 2020 letter. As such, the TCEQ maintains the position that the risk-based Tier 1 PCLs calculated for the 16 PFAS-related compounds are fully scientifically defensible and appropriate for initial screening, assessment and cleanup purposes. PFAS compounds are regulated in Texas as hazardous substances as described in Texas Health and Safety Code (THSC) § 501.002(j) and pollutants as defined in Texas Water Code (TWC) § 26.001(13). In general, an exceedance of the residential Tier 1 TRRP PCL for any PFAS chemicals of concern (COC) is considered a release to the environment regulated under 30 TAC § 350.2(l). In addition, failure to address releases to the environment of a COC regulated under 30 TAC Chapter 350 constitutes a potential unauthorized discharge to the environment and is prohibited by TWC § 26.121(e).

   Therefore, plans and reports submitted to TCEQ for review by DON in future for these sites should not only provide for direct data comparison to TRRP PFAS PCLs, the documents must also provide the results and conclusions of the data comparisons noting any exceedances of TRRP PFAS PCLs for initial release screening, assessment and cleanup purposes to ensure compliance with regulatory requirements of 30 TAC Chapter 350, THSC Chapter 361, TWC Chapter 26, and other applicable and relevant guidance.

DON is directed to submit a response providing the final version of the PA incorporating TCEQ Comment No. 1 to TCEQ for further review. When responding by mail, please submit an electronic copy of all corrective action program-related materials to my attention via my email address Eleanor.Wehner@tceq.texas.gov or via the TCEQ's secure FTP at https://ftps.tceq.texas.gov/help/ until further notice. An additional copy should be submitted in electronic format to the local TCEQ Region Office. The information in the reference block should be included in all submittals. A Correspondence ID Form (TCEQ Form 20428) must accompany each document submitted to the Remediation Division and should be included with your submittal. The Correspondence ID Form helps ensure that your documents are identified correctly and are routed to the applicable program for a timely response. Questions concerning this letter should be directed to me at (512) 239-6542.

Sincerely,

Eleanor T. Wehner

Eleanor T. Wehner, P.G.
Sr. Project Manager
VCP-CA Section
Remediation Division
Texas Commission on Environmental Quality

ETW/etw

cc: Mr. Kevin Olness, Multi-Media Environmental Compliance Group, 9177 Sky Park Court San Diego, CA 92123-4341, via email

Mr. Gregory Lyssy, Sr. Project Manager, USEPA Region 6, RCRA Corrective Action (6LCR-RC), 1201 Elm Street, Suite 500, Dallas, TX 75270, via email

Mr. Tim Purdue, Waste Section Manager, TCEQ Region 14 Office, Corpus Christi, via email

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 14, 2021

VIA ELECTRONIC DELIVERY

Mr. David Barney
BRAC Environmental Coordinator
Naval Facilities Engineering Command
BRAC Program Management Office East
PO Box 169
South Weymouth, MA 02190

Re: TCEQ Acknowledgement of the Department of the Navy's May 12, 2021 *Response to TCEQ Approval with Comment Letter dated December 22, 2020*
Draft Preliminary Assessment Report, Basewide Investigation of Per- and Polyfluoroalkyl Substances (PFAS), dated September 11, 2020
Former Chase Field Naval Air Station, Beeville (Bee County), Texas;
TCEQ SWR No. 68009; EPA ID No. TX3170024738; Customer No. CN600621155;
Regulated Entity No. RN101623072

Dear Mr. Barney:

The Texas Commission on Environmental Quality (TCEQ) acknowledges our receipt of the above referenced response submitted by representatives of the United States Department of the Navy (DON) Naval Facilities Engineering Command. The TCEQ previously issued an approval with a comment letter dated December 22, 2020 in response to our review of DON's September 11, 2020 *Draft Preliminary Assessment (PA) Report* for the former Chase Field Naval Air Station (Site). The TCEQ also previously approved DON's *Drinking Water Survey Report* in a letter issued December 23, 2019, documenting completion of a drinking water survey for Site in accordance with Section 26.408(b) of the Texas Water Code in response to an initial assessment of PFAS contamination in groundwater at the Site performed by representatives of DON during 2017 and 2018. The September 11, 2020 Draft PA proposed to carry the following nine (9) sites for further investigation to determine the presence of PFAS:

- IR Site 3 – Former firefighting training area (FFTA)
- IR Site 4 – FFTA
- IR Site 5 – Heard Ditch at Outfall to Adjacent Property
- AOI 1 – SWMU 83 – Alleged FFTA
- AOI 2 – First 1,500 feet of Runway 13L – site of crash landing
- AOI 3 – First 1,500 feet of Runway 17 – site of crash landing
- AOI 4 – Compass Rose – alleged FFTA
- AOI 5 – North branch of SWMU 5
- AOI 6 – Buildings 2142 and 2101 – Fire Department Storage

The TCEQ's December 22, 2020 letter previously approved DON's recommendation to carry the referenced nine (9) sites for further investigation. Based on our review of DON's May 12, 2021 response, please note the TCEQ's additional clarification comment:

TCEQ's Comment No. 1:

DON's May 12, 2021 Response:

[TCEQ] Comment acknowledged.

The PFAS PA is being conducted within the parameters and limits of the DERP, CERCLA, and applicable policies and guidance. CERCLA is clearly structured, particularly in the PA phase, to identify areas where a known or suspected release has occurred, and not to establish screening criteria that may be used in potential future investigations. All future investigations and data evaluation required by the CERCLA process to make site-specific decisions will be performed in accordance with the current guidelines established by the DoD.

TCEQ Response: AF comment acknowledged. However, please note that our review of the contents (e.g., analytical laboratory data reports of media sampling efforts, etc.) of the pending investigation report for the nine (9) sites will be performed in response to State of Texas regulations and guidance supporting initial release determinations, release assessments, including potential additional statutory drinking water survey response/reporting requirements associated with public notification of groundwater contamination. Therefore, be aware that TCEQ environmental regulations and related guidance (including immediate statutory public notification triggers) are potentially triggered if the analytical results of any PFAS compounds reported in the investigation report are determined to exceed established Tier 1 residential Protective Concentration Levels (PCLs). Although the TCEQ will continue to work in collaboration with DON on the integration of State of Texas requirements and related guidance reported to TCEQ for sites with PFAS Tier 1 PCL exceedances to the environment, please note that we cannot circumvent those requirements for DON in response to TCEQ's technical review of the contents of the pending investigation report submitted by DON.

Questions concerning this letter should be directed to me at (512) 239-6542. When responding by mail, please submit an electronic copy of all corrective action program-related materials to my attention at Eleanor.Wehner@tceq.texas.gov or to my attention via the TCEQ's secure FTP at https://ftps.tceq.texas.gov/help/ until further notice. An additional copy should be submitted in electronic format to the local TCEQ Region Office. The information in the reference block should be included in all submittals. A Correspondence ID Form (TCEQ Form 20428) must accompany each document submitted to the Remediation Division and should be included with your submittal. The Correspondence ID Form helps ensure that your documents are identified correctly and routed to the applicable program for a timely response.

Sincerely,

Eleanor T. Wehner

Eleanor T. Wehner, P.G.
Sr. Project Manager
VCP-CA Section
Remediation Division
Texas Commission on Environmental Quality

ETW/etw

cc: Mr. Kevin Olness, Multi-Media Environmental Compliance Group, 9177 Sky Park Court San Diego, CA 92123-4341 (via electronic delivery)

Mr. Gregory Lyssy, Sr. Project Manager, USEPA Region 6, RCRA Corrective Action (6LCR-RC), 1201 Elm Street, Suite 500, Dallas, TX 75270 (via electronic delivery)

Mr. David Barney
Page 3
July 14, 2021
TCEQ SWR No. 68009

Mr. Tim Purdue, Waste Section Manager, TCEQ Region 14 Office, Corpus Christi (via electronic delivery)

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Responses to Comments on the Draft Preliminary Assessment Report
Basewide Investigation of Per- and Polyfluoroalkyl Substances
Former Naval Air Station Chase Field, Beeville, Texas

	Comment	Response	Follow-up Comment	Follow-up Response
Comments received on December 22, 2020, from Eleanor T. Wehner, P.G., Senior Project Manager, Texas Commission on Environmental Quality			**Comments received on July 14, 2021, from Eleanor T. Wehner, P.G., Senior Project Manager, Texas Commission on Environmental Quality**	
General Comments				
1	Section 1.1 of the Draft PA notes the existence of TCEQ's 16 PFAS-related Tier 1 protective concentration levels (PCLs) in the Texas Risk Reduction Program (TRRP). However, the Draft PA suggests that for technical reasons stated in a DoD June 11, 2020 comment letter to TCEQ (i.e., regarding the use of PCLs as risk assessment screening values and as cleanup standards in CERCLA investigations with PFAS at Texas Military Installations), the TCEQ's PCLs will be used and included for comparative purposes only. As an update, the TCEQ issued a response letter on October 23, 2020 based on our review of DoD's June 11, 2020 letter. As such, the TCEQ maintains the position that the risk-based Tier 1 PCLs calculated for the 16 PFAS-related compounds are fully scientifically defensible and appropriate for initial screening, assessment and cleanup purposes. PFAS compounds are regulated in Texas as hazardous substances as described in Texas Health and Safety Code (THSC) § 501.002(j) and pollutants as defined in Texas Water Code (TWC) § 26.001(13). In general, an exceedance of the residential Tier 1 TRRP PCL for any PFAS chemicals of concern (COC) is considered a release to the environment regulated under 30 TAC § 350.2(l). In addition, failure to address releases to the environment of a COC regulated under 30 TAC Chapter 350 constitutes a potential unauthorized discharge to the environment and is prohibited by TWC § 26.121(e). Therefore, plans and reports submitted to TCEQ for review by DON in future for these sites should not only provide for direct data comparison to	Comment acknowledged. The PFAS PA is being conducted within the parameters and limits of the DERP, CERCLA, and applicable policies and guidance. CERCLA is clearly structured, particularly in the PA phase, to identify areas where a known or suspected release has occurred, and not to establish screening criteria that may be used in potential future investigations. All future investigations and data evaluation required by the CERCLA process to make site-specific decisions will be performed in accordance with the current guidelines established by the DoD.	Air Force comment acknowledged. However, please note that our review of the contents (e.g., analytical laboratory data reports of media sampling efforts, etc.) of the pending investigation report for the nine (9) sites will be performed in response to State of Texas regulations and guidance supporting initial release determinations, release assessments, including potential additional statutory drinking water survey response/reporting requirements associated with public notification of groundwater contamination. Therefore, be aware that TCEQ environmental regulations and related guidance (including immediate statutory public notification triggers) are potentially triggered if the analytical results of any PFAS compounds reported in the investigation report are determined to exceed established Tier 1 residential protective concentration levels (PCLs). Although the TCEQ will continue to work in collaboration with DON on the integration of State of Texas requirements and related guidance reported to TCEQ for sites with PFAS Tier 1 PCL exceedances to the environment, please note that we cannot circumvent those requirements for DON in response to TCEQ's technical review of the contents of the pending investigation report submitted by DON.	Comment acknowledged.

Responses to Comments on the Draft Preliminary Assessment Report Basewide Investigation of Per- and Polyfluoroalkyl Substances Former Naval Air Station Chase Field, Beeville, Texas

	Comment	Response	Follow-up Comment	Follow-up Response
	TRRP PFAS PCLs, the documents must also provide the results and conclusions of the data comparisons noting any exceedances of TRRP PFAS PCLs for initial release screening, assessment and cleanup purposes to ensure compliance with regulatory requirements of 30 TAC Chapter 350, THSC Chapter 361, TWC Chapter 26, and other applicable and relevant guidance.			

Acronyms and Abbreviations:
§ = Section; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; COC = chemical of concern; DERP = Defense Environmental Restoration Program; DoD = United States Department of Defense; DON = United States Department of the Navy; PA = Preliminary Assessment; PCL = protective concentration level; PFAS = per- and polyfluoroalkyl substances; P.G. = Professional Geologist; TAC = Texas Administrative Code; TCEQ = Texas Commission on Environmental Quality; THSC = Texas Health and Safety Code; TRRP = Texas Risk Reduction Program; TWC = Texas Water Code